Environmental Assessment in Canada

Directory of University Teaching and Research 1983-1984

Editors: William J. Couch
Bruce Rigby

Federal Environmental Assessment Review Office

Évaluation environnementale au Canada

Répertoire des cours et de la recherche universitaires 1983-1984

Colligé par: William J. Couch
Bruce Rigby

Bureau fédéral d'examen des évaluations environnementales

-1930/

© Minister of Supply and Services Canada 1984
Cat. No. En 104-5/1984
ISBN 0-662-53369-0

© Ministre des Approvisionnements et Services Canada 1984
N° de cat. En 104-5/1984
ISBN 0-662-53369-0

Environmental Assessment in Canada

Directory of University Teaching and Research 1983-1984

Editors: William J. Couch
Bruce Rigby

Federal Environmental Assessment Review Office

Évaluation environnementale au Canada

Répertoire des cours et de la recherche universitaires 1983-1984

Colligé par: William J. Couch
Bruce Rigby

Bureau fédéral d'examen des évaluations environnementales

ACKNOWLEDGEMENTS

We received aid from many individuals in the generation, collection, and organization of the enormous amount of detailed information that went into this Directory. We would like to thank the numerous participants in this common effort.

We would also like to express a special word of thanks both to Robert Boudreault of la Direction des évaluations environnementales, Ministère de l'Environnement du Québec and to his Office.

REMERCIEMENTS

Bien des gens ont contribué à la préparation, à la cueillette ainsi qu'à l'organisation du très grand nombre d'informations détaillées contenues dans ce Répertoire et nous tenons à les remercier tous pour leur participation à cette oeuvre commune.

Nous tenons à remercier tout spécialement M. Robert Boudreault de la Direction des évaluations environnementales, ministère de l'Environnement du Québec, et les membres de son bureau.

TABLE OF CONTENTS/TABLE DES MATIÈRES

Page

Acknowledgements/Remerciements

Introduction/Introduction 2

Editorial Note/Note de la rédaction 6

Acadia University 9

University of Alberta 10

Athabasca University 12

Brandon University 13

University of British Columbia 15

Brock University 19

University of Calgary 20

Carleton University 25

Concordia University 28

Dalhousie University 29

École Polytechnique de Montréal 32

University of Guelph 34

Lakehead University 37

Laurentian University 38

Université Laval 39

McGill University 42

McMaster University 45

University of Manitoba 47

Memorial University of Newfoundland 49

Université de Moncton 52

Université de Montréal 53

University of New Brunswick 56

Nova Scotia College of Art and Design 58

University of Ottawa/Université d'Ottawa 60

Université du Québec à Chicoutimi 62

Université du Québec à Montréal 64

Université du Québec à Rimouski 67

Université du Québec à Trois-Rivières 69

Université du Québec — Institut national de la recherche scientifique 71

Queen's University 73

University of Regina 75

Ryerson Polytechnical Institute 77

St. Mary's University 79

University of Saskatchewan 80

Université de Sherbrooke 82

Simon Fraser University 85

Technical University of Nova Scotia 87

University of Toronto 89

Trent University 94

University of Victoria 97

University of Waterloo 99

The University of Western Ontario 103

Wilfrid Laurier University 106

University of Windsor 108

York University 110

Bibliographic Submissions/Bibliographies présentées 113

Student papers submitted/Écrits d'étudiants 133

INTRODUCTION

When environmental impact assessment (EIA) was first discussed in the early 1970s, perceptive individuals both in the federal and provincial governments and the private corporate sector realized that it could be an useful tool for making better decisions. The potential environmental effects of proposals would be considered early in the planning of projects and mitigating measures built into the final design. In extreme cases, a proposal could be abandoned before substantial investments were made. The public also seized upon EIA because public participation was a central feature in most Canadian EIA processes. A third segment of society that became involved in this phenomenon was the Canadian academic community.

University courses and research that dealt with ideas related to EIA began to appear before 1975, when it was little more than a developing concept. Now a decade later, there are few universities without courses offering students the opportunity to study themes central to EIA.

Originally EIA was to deal primarily with the biophysical and engineering aspects of resource-development projects. Very quickly though, it became clear that it would be impossible to look at proposals without also dealing with their social and economic implications. Man had to be central to EIA. Since its beginnings, EIA has been multidisciplinary in its approach. Practitioners have drawn information freely from a wide spectrum of disciplines: planning, engineering, geography, biology, sociology, anthropology, law, administration, political science, psychology, history, aesthetics. The synergistic effect of bringing these diverse subjects to bear on specific problems has enhanced EIA's utility and effectiveness. In turn, EIA projected into certain traditional academic disciplines and has influenced them. Some of its conceptual underpinnings have influenced such diverse areas of study as: land-use and resource-use planning, the investigation of cumulative impacts, technology assessment, risk assessment, remote sensing and recreation studies. The cross fertilization of ideas, in fact is creating an editorial dilemma for this publication which was intended to include only material on EIA. Now that the lines between fields are becoming even more blurred and the number of subjects considered to be directly or indirectly related to EIA is so great, our editorial decisions on what must be excluded from the Directory are taking on Solomon-like dimensions.

This Directory is but one thrust of a wider program sponsored by the Federal Environmental Assessment Review Office (FEARO) to improve EIA methodology and to disseminate information drawn from both its own experience and that of others. In 1982 FEARO collated and published a document in collaboration with the federal-provincial EIA Task Force of the Canadian Council of Resource and Environment Ministers (CCREM). *Environmental Assessment in Canada: 1982 Guide to Current Practice* brings together in one convenient publication a description of the federal and each provincial EIA process, along with detailed information on their administration.

A second venture, co-sponsored by FEARO was the study, *An Ecological Framework for Environmental Assessment in Canada* (by Gordon E. Beanlands and Peter N. Duinker, 1983). The objective of that work was to examine the application of ecological principles to the design and conduct of EIAs and to recommend ways it could be improved. In response to a key recommendation in the report, FEARO was instrumental in establishing the Canadian Environmental Assessment Research Council (CEARC). CEARC will advise government, industry and universities on research activities to improve the scientific, technical and procedural bases for EIA. The Council has begun to carry out its charge.

INTRODUCTION

Lorsque, au début des années 1970, on a commencé à discuter d'évaluation des incidences environnementales, des personnes perspicaces du gouvernement fédéral, des gouvernements provinciaux et du secteur privé ont compris que cette évaluation pourrait être un instrument utile pour de meilleures prises de décisions. Les effets environnementaux possibles des propositions seraient examinés au début de la planification, et les mesures d'atténuation, comprises dans le plan final. Une proposition pourrait même être abandonnée avant de faire des investissements substantiels. Le public a aussi adopté d'emblée l'idée parce que sa participation était un élément central dans la plupart des processus d'évaluation des incidences environnementales au Canada. La communauté universitaire du Canada s'est aussi engagée dans cette activité.

Des cours et des recherches universitaires portant sur les idées relatives à l'évaluation des incidences environnementales ont commencé à voir le jour avant 1975, lorsque ce n'était guère plus qu'un nouveau concept. Aujourd'hui, dix ans plus tard, il y a peu d'universités qui n'offrent des cours aux étudiants sur les thèmes centraux de l'évaluation environnementale.

À l'origine, l'évaluation des incidences environnementales portait principalement sur les aspects biophysiques et techniques des projets d'exploitation des ressources. Très rapidement, cependant, il est devenu clair qu'il serait impossible d'examiner les propositions sans considérer aussi leurs répercussions sociales et économiques. L'homme devait être le point central de l'évaluation environnementale. Depuis ses débuts, l'évaluation des incidences environnementales a été multidisciplinaire. Les praticiens ont puisé librement leurs informations dans une vaste gamme de disciplines telles que: la planification, l'ingénierie, la géographie, la biologie, la sociologie, l'anthropologie, le droit, l'administration, les sciences politiques, la psychologie, l'histoire, l'esthétique. L'effet synergique de l'examen de problèmes donnés sous divers angles a accru l'utilité et l'efficacité de l'évaluation des incidences environnementales. À son tour, l'évaluation s'est reflétée dans certaines disciplines universitaires traditionnelles et a influé sur elles. Certains de ses concepts fondamentaux se sont manifestés dans divers domaines d'études tels que: la planification de l'utilisation des terres et de l'utilisation des ressources, l'examen des effets cumulatifs, l'évaluation des techniques, l'évaluation des risques, la télédétection et la récréologie. Le croisement des idées, en fait, pose un problème dans la rédaction du Répertoire, qui ne devait comporter que des informations sur l'évaluation des incidences environnementales. Maintenant que les limites entre les domaines d'études deviennent encore plus floues, et que le nombre de matières considérées comme directement ou indirectement liées à l'évaluation des incidences environnementales est si grand, il faut presque le jugement de Salomon pour décider de ce qui doit être exclu du Répertoire.

Le Répertoire n'est qu'une initiative d'un programme organisé par le Bureau fédéral d'examen des évaluations environnementales (BFEEE), visant à améliorer les méthodes de l'évaluation et à diffuser les informations tirées de notre propre expérience et de celle d'autres intervenants. En 1982, le BFEEE a préparé et publié un document en collaboration avec le groupe d'étude fédéral-provincial sur l'évaluation environnementale du Conseil canadien des ministres des Ressources et de l'Environnement. Le document intitulé *L'évaluation environnementale au Canada — Guide des pratiques actuelles — 1982*, donne en une seule publication la description du processus d'évaluation environnementale du gouvernement fédéral et de chacun des gouvernements provinciaux ainsi que des informations détaillées sur leur administration.

As part of this broader program we foresee the Directory having various uses: informing scholars what their colleagues are doing elsewhere and helping them to identify gaps in study areas; assisting agencies outside the academic world to locate professionals who may possess the specialized and occasionally rare expertise they seek; or helping others, such as students who may be planning graduate research topics. Besides describing programs and courses, and the special research interests of individuals at each university, the Directory also includes a bibliography of writings by Canadian scholars.

In compiling the Directory, we built on the groundwork laid in preparing the first edition. Last year, the majority of Canadian universities were visited to assess what was in fact occurring in EIA and related activities. This year we obtained most of our data through a questionnaire and by telephone. Then we returned the draft text for each school to respondees for verification. In all, about 450 people were contacted across the country. Readers familiar with the 1983-84 edition will note that the 1984-85 edition is somewhat longer. Part of the reason, no doubt, has been the expansion of courses and research in EIA in Canadian universities. But a second reason appears to have been the positive reception to the first edition and the completeness of the response we received to our request for information. Last year, thirty-six institutions appeared in the Directory. This year there are forty-five. We thank all who participated in the project.

Une deuxième initiative a été réalisée en collaboration avec le BFEEE; il s'agit de l'étude intitulée *Un cadre écologique pour l'évaluation environnementale au Canada* (Gordon E. Beanlands et Peter N. Duinker, 1983). L'étude avait pour objectif d'examiner l'application des principes écologiques présidant à la conception et à la réalisation des évaluations environnementales et de recommander des moyens de l'améliorer. En réponse à une recommandation du rapport, le BFEEE a participé à la création du Conseil canadien de recherche sur l'évaluation environnementale. Le Conseil informera les gouvernements, l'industrie et les universités des activités de recherche afin d'améliorer la base technique, scientifique et de procédure de l'évaluation environnementale. Le Conseil a déjà commencé à remplir sa tâche.

Faisant partie d'un vaste programme, le Répertoire aura diverses utilisations: il informera les scientifiques de ce que leurs collègues font dans d'autres régions et les aidera à déterminer les lacunes dans les domaines d'études; il aidera les organisations à l'extérieur de la communauté universitaire à trouver des professionnels pouvant avoir les connaissances spécialisées et parfois peu courantes qu'ils recherchent: il aidera d'autres personnes, tels les étudiants qui envisagent de faire des recherches dans le cadre de leurs études supérieures. En plus de décrire les programmes et les cours, ainsi que les recherches de chaque université, le Répertoire comprend aussi une bibliographie des écrits de scientifiques canadiens.

Pour la rédaction du Répertoire, nous nous sommes basés sur le travail accompli dans la préparation de la première édition. L'année dernière, nous avons visité la plupart des universités canadiennes pour savoir ce qui se faisait en matière d'évaluation environnementale et d'activités connexes. Cette année, nous avons obtenu la plus grande partie de nos données au moyen d'un questionnaire et par téléphone. Nous avons ensuite retourné le texte provisoire pour chaque université aux répondants pour qu'ils le vérifient. Nous avons communiqué avec quelque 450 personnes dans tout le pays. Les lecteurs qui connaissent l'édition de 1983-1984 remarqueront que l'édition de 1984-1985 est un peu plus volumineuse. La raison tient en partie, sans aucun doute, à l'augmentation des cours et des recherches portant sur l'évaluation environnementale dans les universités du Canada. Mais cela s'explique aussi par l'accueil positif réservé à la première édition et aux réponses détaillées que nous avons obtenues. L'année dernière, le Répertoire comptait trente-six établissements. Cette année, il y en a quarante-cinq. Nous remercions tous ceux qui ont participé à la réalisation du Répertoire.

EDITORIAL NOTE

This publication has been organized by institution in alphabetical order. In most cases the section for each university is divided into three parts: Teaching; Individual Research and Work; and Program Activities.

TEACHING:

Course No.	Course Level Indicated by year number or G for graduate	COURSE TITLE Description Instructor

INDIVIDUAL RESEARCH AND WORK:

Name of Researcher	DEPARTMENT/SCHOOL Description of research activities

PROGRAM ACTIVITIES:

A. Program areas in which EIA or directly related activities are undertaken.

B. Whether or not the university offers a core program or streaming in EIA.

C. Other work or events related to EIA occurring on campus.

To the extent possible we have tried to present material in the form we received it. Courses deal either specially with EIA, or treat the theory, methodology and application of EIA as a normal part of course content. Usually courses which deal with baseline data collection or similar ancillary aspects of EIA have been omitted. It should be noted though that this policy is becoming increasingly difficult to apply as courses change their orientation and EIA influences other disciplines hitherto considered to have only a marginal relation to EIA. For entries on individual research and publications, our policy was to allow more latitude because many of the entries could provide a basis for activities related to EIA and be of particular use to individuals with needs for information in specialized subjects.

The style follows standard academic usage. Entries appear in the language they were received. Those sections which are the result of editorial interpretation or which we prepared (with concurrence of the university) appear in both official languages as required by federal policy.

NOTE DE LA RÉDACTION

La présente publication contient une liste des universités par ordre alphabétique anglais. La section qui concerne chaque université a été subdivisée en trois parties: Cours, Recherche et Travaux Personnels et Activités.

COURS:

N° du cours	Niveau	TITRE Description Chargé de cours

RECHERCHE ET TRAVAUX PERSONNELS:

Nom du projet	DÉPARTEMENT Description

ACTIVITÉS:

A. Programmes dans lesquels on effectue des travaux d'évaluation des impacts environnementaux.

B. Y a-t-il un programme portant spécialement sur l'évaluation des incidences environnementales ou, à défaut, une orientation générale des étudiants en ce domaine.

C. Activités se rapportant à l'évaluation des incidences environnementales et (EIE).

Les renseignements sont présentés autant que possible tels qu'ils ont été reçus. Les cours relatifs à la collecte des données de base ou à d'autres aspects de l'EIE ont été omis. Il est à noter toutefois que cette ligne de conduite devient de plus en plus difficile à suivre du fait de changement d'orientation des cours et de ce que l'EIE influence actuellement d'autres disciplines considérées dans le passé comme n'ayant que de lointaines relations avec elle. Pour ce qui est des travaux de recherche ou des publications personnels, nous avons laissé le choix de les mentionner ou pas étant donné qu'un grand nombre de sujets traités pourraient servir de base à des activités se rapportant à l'EIE, et présenter un intérêt particulier pour ceux qui auraient besoin d'information concernant des sujets spécialisés.

En ce qui concerne la langue utilisée, les renseignements et la bibliographie fournis par les universités ont été présentés tels que reçus, conformément à la coutume universitaire. Dans les sections qui résultent d'une interprétation de la rédaction ou que cette dernière a préparées, les renseignements sont présentés dans les deux langues officielles, conformément à la politique fédérale.

ACADIA UNIVERSITY

Location/Endroit: Wolfville, Nova Scotia

Mailing Address/
Adresse: Acadia University
Wolfville, Nova Scotia
BOP IXO

TEACHING:

Department of Biology

4413 (4) WILDLIFE MANAGEMENT

4423 The environmental assessment process is covered in these courses. U.S. and Canadian background and federal involvement including legislation. General processes and legislation in provinces. Examples and case studies. The class is involved in drafting a proposal based on a proposed development. Instructor: D. Dodds.

4573 (4) LIMNOLOGY

Instructor: G. Daborn/M. Brylinsky.

4543 (4) ESTUARINE BIOLOGY

Instructor: G. Daborn.

Note: Environmental assessment is addressed towards the end of the Limnology and Estuarine Biology courses, primarily through case studies of developmental impact upon water bodies in the Atlantic region.

INDIVIDUAL RESEARCH AND WORK:

Daborn, G. BIOLOGY

Impact of tidal power stations on the environment.

Dodds, D. BIOLOGY

Review of Salmon River Hydro Project EIS; impact assessment in recreational development; review of potential impacts by hydroelectric development.

PROGRAM ACTIVITIES:

A. *Department of Biology*

EIA is not a major area of teaching or research in the department. However, several faculty members have been involved in the past. They are currently only indirectly involved.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA: None indicated.

ACTIVITÉS:

A. *Département de Biologie*

L'EIE n'est pas un domaine d'enseignement ou de recherche important de ce département. Toutefois, plusieurs professeurs ont déjà travaillé dans ce domaine; actuellement, ils n'y travaillent qu'indirectement.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

UNIVERSITY OF ALBERTA

Location/Endroit: Edmonton, Alberta

Mailing Address/ Adresse: The University of Alberta
Edmonton, Alberta
T6G 2H1

TEACHING:

Department of Economics

INT D 369 (3) ECONOMICS OF THE ENVIRONMENT

Economic growth and deterioration of the environment; types and causes of environmental deterioration; theory, policy, and measurement relating to environmental deterioration; recreation economics; and current Canadian environmental topics.

Department of Forest Science

FOR 301 (3) SPRING CAMP

A five-week field camp designed to introduce students to the broader aspects of forest land resource assessment, evaluation and management, including assessment of impacts of various forms of resource development. Instructor: H.G. Pratley.

FOR 311 (2) FOREST MEASUREMENTS II

Designed to introduce students to the principles and practices of measuring a variety of wildland resources including land, timber, water, range, wildlife and recreation. Instructor: J.D. Heidt.

FOR 503 (G) VEGETATIVE RECLAMATION OF DISTURBED FOREST LAND

This course emphasizes environmental impact assessment of proposed resource developments, particularly related to coal and petroleum. Reclamation techniques from a vegetation standpoint are described in detail. Instructor: D.G. Walker.

Department of Mineral Engineering

MNL 508 (G) MINE ENVIRONMENTAL PLANNING

Mine planning, development and exploitation of mineral deposits as influenced by (1) disposal of waste rock (2) engineering and design of tailings (3) reclamation and drainage and pollution control case studies. The concepts of EIA form an important feature of this course.

Department of Recreation and Leisure Studies

REC 435 (3/4) OUTDOOR RECREATION RESOURCES

An examination of the principles of resource allocation and land use in a recreational context together with an analysis of the patterns and trends in outdoor recreation. Particular attention will be given to evaluating a variety of environmental settings in terms of their suitability for outdoor recreation and the types of recreational experiences associated with them. Instructor: G.S. Swinnerton.

INDIVIDUAL RESEARCH AND WORK:

Butler, J.R.	FOREST SCIENCE Impacts of wildland recreation on wildlife.
Dudas, M.J.	SOIL SCIENCE EIA and land reclamation.
Fuller, W.A.	ZOOLOGY Member, Slave River Project Environmental Assessment Panel.
McGill, W.B.	SOIL SCIENCE EIA and land reclamation.
Nyborg, M.	SOIL SCIENCE EIA and land reclamation.
Pluth, D.J.	SOIL SCIENCE EIA and land reclamation.
Swinnerton, G.	RECREATION AND LEISURE STUDIES Impact of recreation on land use.

PROGRAM ACTIVITIES:

A. 1) *Boreal Institute for Northern Studies*

A research body reporting to the Vice-President (Research). It acts as co-ordinator of campus interests in northern research.

2) *Faculty of Agriculture and Forestry*

Professionally oriented environmental program; environmental assessment is approached as it relates to natural systems. Particular emphasis is given to agricultural and forest lands.

B. EIA Core Program or Streaming?: None indicated.

C. Activities related to EIA: None indicated.

ACTIVITÉS:

A. 1) *Institut des études nordiques*

Institut de recherche qui se rapporte au vice-président de la recherche et qui coordonne les activités de l'université en matière de recherches sur le Nord.

2) *Faculté d'Agriculture et de Foresterie*

Programme sur l'environnement débouchant sur une profession; l'évaluation des incidences environnementales est abordée du point de vue des systèmes naturels. L'emphase est placée sur les terres agricoles et forestières.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités spéciales se rapportant aux évaluations environnementales: Aucunes.

ATHABASCA UNIVERSITY

Location/Endroit: Athabasca, Alberta

Mailing Address/ Adresse: P.O. Box 10,000
Athabasca, Alberta
T0G 2R0

TEACHING:

Science

BIOL 203 (1) WORLD ECOLOGY: THE SCIENTIFIC CONTEXT

An introduction to ecology. Emphasizes man's impact on the biosphere by covering such topics as: results of fertilizers and biocides entering biogeochemical cycles, consequences of various energy options and problems of over-population. Home study with optional 6-day field ecology workshop. Co-ordinator: R.G. Holmberg.

ENVS 323 (2) ECOLOGICAL PRINCIPLES FOR RESOURCE PLANNERS AND MANAGERS

The course reviews ecological principles and develops an ecosystem approach to natural resource planning and management. Environmentally sensitive and other highly valued resources are studied, and planning and management tools for their wise use and protection are covered. Students learn how to construct a detailed natural resource inventory, and study methods of natural resource analysis. Home Study. Co-ordinator: T.S. Bakshi.

ENVS 347 (2) ENVIRONMENTAL IMPACT ASSESSMENT

The course introduces students to the requirements for and methods of preparation of an environmental impact assessment (EIA) report. The historical development of EIA, and legal and administrative requirements for EIA studies are explained. The work of a natural resource manager and planner in preparing such a report is reviewed. Home Study. Co-ordinator: T.S. Bakshi.

Social Sciences

GEOG 317 (2) MAN AND ENVIRONMENT

Studies the effect of the natural environment on man and man's modification of the environment. Introduces students to techniques employed in recording environmental concepts, and develops skills for describing and interpreting environmental phenomena and problems in Canada today. Home study, with television components. Co-ordinator: B. Spronk.

INDIVIDUAL RESEARCH AND WORK:

None Indicated.

PROGRAM ACTIVITIES:

A. Athabasca University students do most or all of their learning at home, using specially designed home study materials. All home study students are assigned a telephone tutor to whom they have toll-free access from anywhere in Canada. In some cases, courses are supplemented by radio and television programs, audiotapes, seminars, workshops, or teleconference sessions.

B. EIA Core Program or Streaming: None indicated.

C. Activities Related to EIA: None indicated.

ACTIVITÉS:

A. Les étudiants de l'université travaillent presque toujours à domicile, en utilisant du matériel spécialement conçu. Tous les étudiants à domicile ont un tuteur téléphonique avec qui ils peuvent communiquer sans frais à travers le Canada. Dans certains cas, on complète les cours par des programmes de radio ou de télévision, des bandes magnétiques, des séminaires, des ateliers, ou des sessions de conférences téléphoniques.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

BRANDON UNIVERSITY

Location/Endroit: Brandon, Manitoba

Mailing Address/ Adresse: Brandon University
Brandon, Manitoba
R7A 6A9

TEACHING:

Department of Geography

38.292 (2) GEOGRAPHY OF WATER RESOURCES

Water as a basic world resource: its use and abuse by man and problems caused by conflicting demands for water use; problems caused by over-abundance of water (floods) and shortages of water (drought); flood prevention and control, and some possible solutions for water shortages; minor compared with major water resource projects illustrated by reference to some major Canadian water resource schemes; Canadian water law and public participation in water resource management. Instructor: J. Welsted.

38.294 (2) RECREATIONAL RESOURCES AND PLANNING

Modern man devotes considerable time and expense to pursuit of recreational activities. This course deals with the spatial interrelationships between the user public and the resource base required for recreation. Units inciude passive recreation, active recreation, supply and demand, resource base evaluation, government policies and planning and projecting future trends. This course is not concerned with urban-based recreation or organized sports. Instructor: R.C. Rounds.

38.392 (3) RENEWABLE RESOURCE MANAGEMENT

A study of man-land relationships with emphasis on theory of resource management. A multi-factorial approach is used to establish a framework for analyzing resource exploitation. Emphasis is placed on renewable resources with concentration on public resources. Conflicting ideologies and comparative resource programs are examined. Instructor: R.C. Rounds.

38.393 (3) LAND USE PLANNING

An examination of the history and problems of land use. A study of the principles and practices of regional planning. The fundamentals involved in any approach to planning will be illustrated by means of a Canadian case study relating to economics, resource development, watershed conservation, changing land use, and characteristics of site and situation. Instructor: R.C. Rounds.

38.479 (4) ENVIRONMENTAL PERCEPTION AND BEHAVIOR

It is becoming increasingly clear that to understand environmental decision-making, knowledge of peoples' environmental perceptions and behavior is essential. This is because decisions to modify or change the environment are based not so much on the environment as it is but rather on the environment as it is perceived by the decision-makers. This course looks at the theory and practice of the geographical aspects of this interdisciplinary field of study. Instructor: J.C. Everitt.

INDIVIDUAL RESEARCH AND WORK:

Rounds, R.C. GEOGRAPHY

Ecological basis for environmental assessment; carrying capacity; biophysical impact.

PROGRAM ACTIVITIES:

A. *Department of Environmental Science*

A major in Environmental Science is offered which allows interested students an opportunity to pursue a wide range of studies related to the physical and human environment.

B. EIA Core Program or Streaming?: None indicated.

C. Activities related to EIA: None indicated.

ACTIVITÉS:

A. *Department of Environmental Science*

Une spécialité en sciences de l'environnement est offerte aux étudiants intéressés qui leur permettra de poursuivre toute une gamme d'études se rapportant à l'environnement physique et humain.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

UNIVERSITY OF BRITISH COLUMBIA

Location/Endroit: Vancouver, British Columbia

Mailing Address/
Adresse: The University of British Columbia
2075 Wesbrook Mall
Vancouver, British Columbia
V6T IW5

TEACHING:

School of Community and Regional Planning

PLAN 504 (G) ECOLOGY OF URBAN REGIONS

This course provides a bioecological perspective on urban systems and particularly their impacts on the natural environment. The purpose is to develop a general framework for the application of basic ecological theory and principles to environmental management and planning, including such techniques as impact assessment.

PLAN 505 (G) SOCIAL PLANNING POLICY

The historical context and present issues in social policy in Canada. The purpose of the course is to provide an understanding of the economic and ideological basis for Canadian social policy and to investigate current planning issues related to social policy.

PLAN 514 (G) ENVIRONMENTAL IMPACT ASSESSMENT

Current issues, approaches and techniques pertaining to environmental impact assessment in general, and social impact assessment in particular.

PLAN 532 (G) PLANNING FOR WATER RESOURCES MANAGEMENT

Principles and practices of planning for water resources management. The integration of the biophysical and socio-economic sciences, and institutional systems into planning and management. Application of principles to the analysis of case studies in selected water resource issues. Instructor: A. Dorcey.

PLAN 550 (G) PLANNING FOR NATURAL RESOURCES MANAGEMENT.

Instructor: A. Dorcey.

Department of Geography

GEOG 315 (3) ENVIRONMENTAL INVENTORY AND CLASSIFICATION

Classification and inventory of those biophysical elements which influence people's use of air, land and water. Instructor: M. North.

GEOG 366 (3) ENVIRONMENT AND RESOURCES

Concepts of environment and resources; the role of physical geography in understanding the interaction of man and the environment; introduction to the management of environment-resource systems. Instructor: M. Church.

GEOG 415 (4) ENVIRONMENTAL QUALITY AND IMPACT ASSESSMENT

Environmental quality from the standpoints of human perception, government standards, methods of measurement, impact assessment and strategies for the enhancement of quality. Case studies are drawn primarily from North America. Instructor: O. Slaymaker.

GEOG 417 (4) PHYSICAL ENVIRONMENT OF THE CITY

The impact of urbanization upon the natural environment and vice versa. Aspects of urban climate, soils, hydrology, physiography, vegetation and wildlife. Urban metabolism, pollution, waste management and natural hazards. Instructor: T. Oke.

GEOG 418 (4) ENVIRONMENTAL CHANGE

Changes in the physical environment in terms of long-term (e.g. climatic change), intermittent (e.g. landslides and avalanches) and sequential (e.g. plant successions) environmental changes. Emphasis on the role of and impacts on people. Instructor: D. Steyn.

GEOG 466 (4) GEOGRAPHY AND RESOURCE MANAGEMENT

Geographical analysis of complex man-environment systems. Illustration of the roles of physical processes, institutional framework and technology in the interaction of man and environment at several scales. Instructor: J. Chapman.

Faculty of Law

LAW 472 (4) ENVIRONMENTAL LAW

Study of the effectiveness of private law remedies. In addition, various alternative administrative schemes for controlling environmental degradation will be investigated. Particular emphasis will be placed on legal aspects of air and water pollution control.

Department of Economics

ECON 370 (3) BENEFIT-COST ANALYSIS AND THE ECONOMICS OF PROJECT EVALUATION

Techniques and problems in benefit-cost analysis of public projects. Examination of alternative approaches to public decision-making such as cost-effectiveness analysis and multiple objective frameworks. Case studies of projects in the areas of natural resources, the environment, human resources, public services, and transportation.

ECON 471 (4) ECONOMICS OF RENEWABLE RESOURCES

Application of economic analysis to the management of renewable natural resources. Special attention is given to criteria for the optimal use of depleting resources such as forests, fisheries, and water. Other topics include public policy with regard to environmental quality, conservation, and outdoor recreation.

Department of Civil Engineering

CIVL 567 (G) WATER POLLUTION CONTROL ENGINEERING II

Industrial design waste survey and design problems. Appraisal and analysis of existing water quality management systems and water quality and effluent regulatory systems. Students are introduced to the difference between EIA and pollution control and study both federal and provincial EIA processes. They also do work in cost-benefit analysis. Instructor: J. Atwater.

INDIVIDUAL RESEARCH AND WORK:

Boothroyd, P. SCHOOL OF COMMUNITY AND REGIONAL PLANNING

Ongoing research on EIA/SIA processes in western and northern Canada, and on substantive impacts of industrial development on remote communities.

Carley, M. SCHOOL OF COMMUNITY AND REGIONAL PLANNING

A social impact monitoring framework for the Beaufort Sea development.

Dorcey, A. WESTWATER RESEARCH CENTRE

Research on the management of coastal resources; an analytical framework for planning in the management of fishery-mariculture resources on the coast of British Columbia; reform of the governing of Canada's Pacific coast resources.

Golding, D.L. FACULTY OF FORESTRY

Environmental impact of forest harvesting on water resources for B.C. Ministry of Forests.

Golob, D. WESTWATER RESEARCH CENTRE

Interest involvement in the planning process through an examination of the Fraser River Estuary Study (M.A. research).

McKee, G. SCHOOL OF COMMUNITY AND REGIONAL PLANNING

The role of EARP in decision-making for the Alaska Highway Gas Pipeline (M.A. research).

Marchak, P. ANTHROPOLOGY AND SOCIOLOGY

The social and environmental impacts of the forest and fishing industries in British Columbia.

Rees, W.E. SCHOOL OF COMMUNITY AND REGIONAL PLANNING

Ongoing research on aspects of EIA/SIA as applied at the federal level in the Beaufort Sea and at the provincial level (B.C. Northeast Coal Development).

Winsby, M. SCHOOL OF COMMUNITY AND REGIONAL PLANNING

EIA in mining (M.A. research).

PROGRAM ACTIVITIES:

A. 1) *Westwater Research Centre*

A research centre with an interdisciplinary program of research on the design of policies and institutions

for managing coastal resources. The research is supported by government agencies, foundations and industry. Many of the component studies consider the procedures and methods of EIA and SIA.

2) *School of Community and Regional Planning*

A graduate school which as part of its program allows students the opportunity to examine questions relating to EIA and SIA. Most research activity relating to EIA/SIA can be found being undertaken by members of this School and the Westwater Research Centre.

3) *Faculty of Forestry*

EIA is dealt with as it applies to forest management.

4) *The Centre for Continuing Education*

Offers a directed independent studies course entitled Environmental Assessment in Regional Planning. The course text is a three volume manual prepared and edited by W.E. Rees (School of Community and Regional Planning).

5) *Department of Anthropology and Sociology*

SIA and EIA as they may apply to the fishing industry of British Columbia.

6) *Ocean Studies Council*

The Ocean Studies Council (Faculty of Graduate Studies), which consists of faculty members drawn from a number of disciplines at the University of British Columbia, promotes interdisciplinary research on ocean matters within the University. Representatives are from: Animal Resource Ecology, Asian Research, Bio-Resource Engineering, Commerce, Economics, Forestry, Geography, International Relations, Law, Mathematics, Oceanography, Political Science, Slavonic Studies, and the Westwater Research Centre.

B. EIA Core Program or Streaming?:

No, however respondents indicated that at an undergraduate level, those students interested in EIA are encouraged to take courses which will give them the tools to work at the graduate level. Courses relate to subjects such as the quality of information collected, methodologies, and so on. At the graduate level, students may follow a program making use of the facilities of study and research provided by the School of Community and Regional Planning and the Westwater Research Centre.

C. Activities Related to EIA:

1) Westwater Research Centre arranges seminars workshops and conferences related to EIA.

2) Professors W. Rees, P. Boothroyd and C. Weaver, School of Community and Regional Planning, received (1982-83) a three-year grant from the Donner Canadian Foundation to study various "Planning and Policy Implications of Northern Megaprojects".

ACTIVITÉS:

A. 1) *Westwater Research Centre*

Centre de recherche qui possède un programme interdisciplinaire de recherche sur la création de politiques et d'institutions visant la gestion des ressources riveraines. La recherche est subventionnée par des organismes gouvernementaux, des fondations et l'industrie. Beaucoup d'études portent sur les procédures et les méthodes d'évaluation environnementale.

2) *School of Community and Regional Planning*

École pour étudiants diplômés qui, dans le cadre de son programme, permet aux étudiants de se familiariser avec des sujets qui se rapportent aux évaluations environnementales. La plupart des activités de recherche dans ce domaine sont entreprises dans cette école et au centre Westwater.

3) *Faculty of Forestry*

On y étudie les évaluations environnementales en rapport avec l'aménagement forestier.

4) *The Centre for Continuing Education*

Offre un programme d'études indépendant et dirigé intitulé Évaluation environnementale et planification régionale. La matière du cours est contenue dans un manuel en trois volumes préparé par W.E. Rees (School of Community and Regional Planning).

5) *Department of Anthropology and Sociology*

On y étudie l'évaluation environnementale et sociale en rapport avec l'industrie des pêches de la Colombie-Britannique.

6) *Ocean Studies Council*

Le Conseil des études océaniques, (Faculty of Graduate Studies) composé de professeurs issus de diverses disciplines à l'université de la Colombie-Britannique, appuie au sein de l'université la recherche interdisciplinaire de sujets relatifs aux océans. Les représentants sont de : l'écologie des ressources animales, la recherche asiatique, l'ingénierie des ressources biologiques, le commerce, l'économie, la foresterie, la géographie, les relations internationales, le droit, les mathématiques, l'océanographie, les sciences politiques, les études slaves et le centre de recherche Westwater.

B. Programme spécifique aux évaluations environnementales?

Non. Toutefois, on encourage les étudiants non diplômés, qui s'intéressent à l'évaluation environnementale, à suivre des cours qui leur serviront lorsqu'ils entreprendront des études supérieures. Les sujets traités dans ces cours sont la qualité des renseignements recueillis, les méthodes, etc. Une fois diplômés, les étudiants peuvent entreprendre un programme

d'études et de recherches à l'école de planification communautaire et régionale ainsi qu'au centre de recherche Westwater.

C. Activités se rapportant aux évaluations environnementales.

1) Le centre Westwater organise des séminaires, des ateliers et des conférences.

2) Les professeurs W. Rees, P. Boothroyd et C. Weaver de l'école de planification communautaire et régionale ont reçu une subvention de trois ans de la fondation canadienne Donner pour faire des études sur la planification et la politique des grands projets du nord.

BROCK UNIVERSITY

Location/Endroit: St. Catharines, Ontario

Mailing Address/ Adresse: Brock University
St. Catharines, Ontario
L2S 3A1

TEACHING:

Institute of Urban and Environmental Studies

353 (3) ENVIRONMENTAL IMPACT ASSESSMENT

The development of EIA in Canada and other countries; methods of environmental impact analysis, the EIS; a review of Canadian government procedures; and examples of assessments on northern pipelines, hydroelectric and nuclear power stations. Instructor: F. Berkes.

INDIVIDUAL RESEARCH AND WORK:

Berkes, F. INSTITUTE OF URBAN AND ENVIRONMENTAL STUDIES

Environmental impact of the James Bay hydroelectric project on estuarine fisheries and native fishermen; fishery resources and their allocation, and user-group interactions; consultant/technical advisor on the impacts of James Bay development.

PROGRAM ACTIVITIES:

A. Research is undertaken by members of the Institute of Urban and Environmental Studies and the Departments of Geography and Sociology.

B. EIS Core Program or Streaming?: None.

C. Activities Related to EIA: Seminars and workshops.

ACTIVITÉS:

A. Travaux de recherche entrepris à l'Institut des études urbaines et environnementales (Institute of Urban and Environmental Studies) et aux départements de géographie et sociologie.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Séminaires et ateliers.

THE UNIVERSITY OF CALGARY

Location/Endroit: Calgary, Alberta

Mailing Address/ Adresse: The University of Calgary
2500 University Drive, N.W.
Calgary, Alberta
T2N 1N4

TEACHING:

Department of Psychology

PSYC 427 (4) ENVIRONMENTAL PSYCHOLOGY

This course introduces the student to psychological research, principles, and theories which relate to the influence of both the man-made and the natural environment on human behavior. Content includes evaluating environmental influences, theories of environment-behavior relationships, personal space and territoriality and the perception of the environment. Instructors: R. Dewar, B. Dunn.

Department of Sociology

SOC 451 (4) SOCIOLOGY OF NATURAL RESOURCE DEVELOPMENT

The social impact of resource development on communities, groups and institutions will be examined. The interaction of government, industry and local citizen involvement will be examined including social policy in resource development. Instructor: J. DiSanto.

Faculty of Environmental Design

EVDS 501 (4) RESOURCES AND ENVIRONMENTAL ENGINEERING

Techniques of surveying, development, management and conservation of resources. Terrain analysis using remote-sensed data. Energy resources and evaluation of power generation alternatives. Planning of major regional developments in terms of engineering, economic, ecological and sociological parameters. Environmental impact assessments. Instructor: R.D. Revel.

EVDS 531
LAW 531 (4) NATURAL RESOURCES AND ENVIRONMENTAL LAW

Interdisciplinary studies under instructors from the Faculties of Law and Environmental Design. Lectures and readings on ecological principles, economics, economic analysis in environmental policy, public and private law concepts. Selected issues (e.g. information access, environmental assessment). Independent directed research by multidisciplinary student teams; presentation of results. Instructor: P.S. Elder.

EVDS 649 (G) ENVIRONMENTAL IMPACT ASSESSMENT

The course is designed to provide students with an introduction to socio-economic and biophysical impact analysis and assessment methods, techniques, approaches and processes. The course will be structured around a case study. The class will critique a recent EIA. Instructor: D. Thompson.

EVDS 707 (G) ECOLOGICAL MANAGEMENT IN LAND USE PLANNING

A studio course in which a real land use problem with a major ecological management component is taken on by the class as a consulting team. Problem definition, proposal preparation, and the complete study from regional biophysical and land use inventory through client presentations of interim and final results are completed within the term. The final report must include development recommendations and environmental management guidelines. Projects are drawn mainly from the resource development industry, although other potential clients are considered. Instructor: R.D. Revel.

EVDS 747 (G) ENVIRONMENTAL MANAGEMENT

The methods used by government and industry to integrate environmental and social factors into their day-to-day operations and planning are in constant evolution. There is an increasing realization that the management strategy employed is more significant than the detailed issues of specific environmental/social problems. The knowledge about and use of management skills are essential for successful environmental science practitioners. Instructor: D. Thompson.

EVDS 725 (G) TOPICS IN WILDLIFE MANAGEMENT AND RESOURCE DEVELOPMENT

The general aim of the course is to provide the student with an ade-

quate background to begin work on how to reach a sensible compromise between industrial and wildlife interests. Instructor: V. Geist.

Department of Anthropology

ANT 538 (4) ECONOMIC DEVELOPMENT

Focuses upon the impact of large-scale developments in both urban and rural areas. Comparative data from other cultures will also be presented.

Canadian Studies Program

CAN ST 309 (3) DEVELOPMENT OF THE CANADIAN NORTH

The material presented will provide an historical analysis of the development and growth of the North. Contemporary issues concerning development and the impact of this development will be analyzed.

Department of Biology

BIO 421 (4) MANAGEMENT OF THE BIOSPHERE

The course is an examination of the role of the human population in the biosphere and of the consequences of interactions between our species and the planetary ecosystem. An interdisciplinary look at resources highlighting the use of EIA.

Department of Geography

GEOG 321 (3) ENVIRONMENTAL PROBLEMS AND RESOURCE MANAGEMENT

Basic problems and issues in the use of selected resources and environments. Emphasis on North America and renewable resources.

GEOG 397 (3) GEOGRAPHY OF THE NORTHLANDS

Environment, resource development and human activity, with emphasis on Alaska, Yukon, Northwest Territories, Greenland and Iceland.

GEOG 519 (G) BIOPHYSICAL INVENTORY AND ANALYSIS

Biophysical inventory and mapping methodology applied to land capability and environmental impact studies. Components considered include vegetation, wildlife, topography, surficial deposits, soils, hydrology and climate.

GEOG 617 (G) ADVANCED WILDLANDS ECOSYSTEMS

Interpretation of biotic, physical and human interrelationships, classification and spatial distribution of wildland ecosystems. Involves field studies in the local area.

INDIVIDUAL RESEARCH AND WORK:

Abele, F. ARCTIC INSTITUTE OF NORTH AMERICA

Native and Social Issue Programs-training which will enable northern native people to design social impact assessment studies and prepare submissions for regulatory hearings and public meetings; a major study of native employment training programs in northern Canada.

Bankes, N. CANADIAN INSTITUTE OF RESOURCES LAW

Impact assessment and management; environmental monitoring.

Barz, D. FACULTY OF ENVIRONMENTAL DESIGN

An assessment of the British Columbia Utilities Commission Energy Project Review Process. (M.E. Des. research)

Beck, R. FACULTY OF ENVIRONMENTAL DESIGN

Community-based monitoring system (Fort Simpson Indian Band) (M.E. Des. research).

Boyd, E. PSYCHOLOGY

Environmental impact of noise.

Copeman, M. FACULTY OF ENVIRONMENTAL DESIGN

Visual resource evaluation and management plan for Cochrane Ranche, Alberta. (M.E. Des. research)

Cordes, L. GEOGRAPHY

Environmental impact assessment.

DiSanto, J. SOCIOLOGY

Relationship of public participation to social breakdown and alienation in a major thermal power project; community relocation in energy resource development.

Duguid, T.	FACULTY OF ENVIRONMENTAL DESIGN Decision-making in scientific and technical controversy (M.E. Des. research).
Dunn, B.	PSYCHOLOGY Environmental impact of noise.
Eisenhauer, J.	RESOURCES AND THE ENVIRONMENT Federal Environmental Assessment and Review Guidelines and the Canadian petroleum industry (M.Sc. research).
Elder, P.S.	FACULTY OF ENVIRONMENTAL DESIGN Socio-economic impacts of the rise and fall of the Cold Lake project (M.E. Des. research).
Frideres, J.	SOCIOLOGY Assessing social impact in the North; ethnic relations and impact in multi-ethnic communities; developing a methodology for assessing social impact.
Henderson, L.	FACULTY OF ENVIRONMENTAL DESIGN Assessment associated with renewable resource development in the North (M.E. Des. research).
Hunt, C.	CANADIAN INSTITUTE OF RESOURCES LAW Environmental law and regulatory processes.
Kariel, H.	GEOGRAPHY Environmental impact of noise.
Legge, A.	KANANASKIS CENTRE Environmental impact assessment; multidisciplinary research and co-ordination.
Lowry, J.	RESOURCES AND THE ENVIRONMENT Public participation and site selection in the hazardous waste management process (M.Sc. research).
Lucas, A.	FACULTY OF LAW Canadian Arctic Resources Committee; environmental law; fairness in public hearings.
McCraken, C.	FACULTY OF ENVIRONMENTAL DESIGN Socio-economic impacts of the rise and fall of the Cold Lake project (M.E. Des. research).
Raynard, C.	FACULTY OF ENVIRONMENTAL DESIGN Application of remote sensing to resource evaluation and environmental impact assessment in British Columbia (M.E. Des. research).
Ross, G.	FACULTY OF ENVIRONMENTAL DESIGN Environmental monitoring; use of remote sensing techniques in biophysical analysis and EIA.
Ross, W.A.	FACULTY OF ENVIRONMENTAL DESIGN Member of Banff Highway Project Environmental Assessment Panel; member of CP Rail Rogers Pass Development Environmental Assessment Panel.
Scott-Brown, M.	FACULTY OF ENVIRONMENTAL DESIGN Wildlife monitoring along the Trans-Canada Highway in Banff National Park (km. 0-13).
Tester, F.	KANANASKIS CENTRE Social impact assessment — program evaluation, social policy, Northern policy.
Wallace, K.	RESOURCES AND THE ENVIRONMENT Effects of disturbance caused by pipeline construction on post-construction productivity of land (M.Sc. research).

PROGRAM ACTIVITIES:

A. 1) *Faculty of Environmental Design*

The Faculty is a graduate school that offers a professionally oriented program for its students. It is involved in wildlife management, regional planning, terrain analysis, parks planning and international reserves, forest ecology, ethology. The Faculty is also developing specific capacities in the application of remote sensing to impact assessment and computerized graphics for use in impact and visual assessment. Students are encouraged to undertake practical research in which they obtain experience from real-world situations.

2) *Kananaskis Centre for Environmental Research*

The Centre has facilities located on campus and at a field station located approximately 80 km west of Calgary in the Kananaskis Valley. The major themes of research in the Centre relate to the science and technology of environmental aspects of resource development in western and northern Canada. Research is funded primarily from off-campus sources, and students may be retained if their research interests are like those of members of the Centre.

3) *Arctic Institute of North America*

The Institute is a non-profit organization, affiliated with the University of Calgary. The objectives of the Institute are: to initiate, encourage, support, and advance the study of arctic conditions and problems. In conjunction with the University, a Northern Political Studies Program is offered.

The Institute operates two research facilities: the Kluane Lake Research Station and the Devon Island Research Station. In addition, the Institute publishes a quarterly scientific journal *Arctic* and a quarterly newsletter "Information North"; maintains ASTIS — the Arctic Science and Technology Information System, a computerized data base; and sponsors research on various topics by interested academics.

4) *Canadian Institute for Resources Law*

The Institute offers a program that specializes in the issues and law of resource development. In particular, a major interest is the way in which environmental regulation is applied to oil and gas development.

5) *Master's Program in Resources and the Environment*

The Faculty of Graduate Studies offers an M.A. or an M.Sc. degree in Resources and the Environment. Students in this interdisciplinary program may study or specialize in EIA.

B. EIA Core Program or Streaming?:

Although there is no particular EIA program, students at both the undergraduate and graduate levels can plan programs with the assistance of faculty members which will allow them to graduate with a degree with a concentration in EIA. In particular, students can organize a program through the Department of Geography, at an undergraduate level, and through the Faculty of Environmental Design or the Resources and the Environment Program at the graduate level.

C. Special Activities Related to EIA:

1) *Department of Sociology*

The Department organizes colloquia on various subjects relating to sociology. In 1982, the third annual colloquium was entitled: "The Social Responses to Technological Change and Environmental Impact."

2) *Canadian Institute for Resources Law*

In conjunction with the Federal Environmental Assessment Review Office (FEARO) and the Banff Centre, a two-day workshop on fairness and natural justice in environmental assessment hearings was held in February, 1983. The proceedings of this workshop will be published in 1984. From time to time, the Institute also offers various other workshops and colloquia on subjects relating to EIA.

ACTIVITÉS:

A. 1) *Faculty of Environmental Design*

École pour étudiants diplômés qui offre un programme débouchant sur une profession. On s'occupe de la gestion de la faune, de la planification régionale, de l'analyse du terrain, de la planification des parcs et des réserves internationales, de l'écologie/éthologie des forêts. La faculté développe également des capacités spécifiques à l'application de la technique de la télédétection aux évaluations d'impact et des graphiques informatisés pour représenter les impacts visuels. On y encourage les étudiants à entreprendre des recherches pratiques pour acquérir de l'expérience à partir de situations réelles.

2) *Kananaskis Centre for Environmental Research*

Ce centre possède des installations à l'université ainsi que dans une station régionale qui se trouve à 80 km environ à l'ouest de Calgary dans la vallée de la Kananaskis. La recherche porte surtout sur la science et la technologie des aspects environnementaux de la mise en valeur des ressources dans l'Ouest et le Nord canadiens. Les subventions proviennent principalement de sources extérieures à l'université, et les étudiants peuvent être acceptés si leurs sujets de recherche sont semblables à ceux des membres du Centre.

3) *Arctic Institute of North America*

Organisation sans but lucratif affiliée à l'université de Calgary. L'Institut a pour objectifs d'amorcer, d'encourager, d'aider et de faire progresser l'étude des conditions arctiques et des problèmes qui s'y rapportent. Il offre, conjointement avec l'université, un programme d'études politiques nordiques.

L'Institut exploite deux stations de recherche: l'une au lac Kluane, et l'autre, dans l'île Devon. En outre, il publie tous les trois mois une revue scientifique intitulée *Arctic* ainsi qu'un bulletin: *Information North*; il exploite la base de données ASTIS (Arctic Science and Technology Information System) et subventionne des travaux de recherche sur différents sujets effectués par des universitaires intéressés par ce domaine.

4) *Canadian Institute for Resources Law*

L'Institut offre un programme qui porte sur les questions et les lois relatives à la mise en valeur des res-

sources. En particulier, il s'intéresse considérablement à la façon dont les règlements concernant l'environnement sont appliqués à l'exploitation du pétrole et du gaz.

5) *Master's Program in Resources and the Environment*

La Faculty of Graduate Studies offre un programme de maîtrise (M.A. ou M.Sc.) en études des ressources et de l'environnement. Les étudiants de ce programme interdisciplinaire peuvent soit étudier soit se spécialiser en évaluation environnementale.

B. Programme spécifique aux évaluations environnementales?

Bien qu'il n'existe pas de programme particulier dans ce domaine, les étudiants non diplômés et diplômés peuvent, avec l'aide des professeurs, organiser des programmes qui leur permettront d'obtenir un diplôme avec concentration en évaluation environnementale. Plus précisément, les étudiants non diplômés peuvent organiser un programme avec les professeurs du département de Géographie, et les étudiants diplômés, avec les professeurs de la Faculty of Environmental Design ou ceux du programme des ressources et environnement.

C. Activités se rapportant aux évaluations environnementales:

1) *Department of Sociology*

Le département organise des colloques sur divers sujets relatifs à la sociologie. Le troisième colloque annuel, tenu en 1982, avait pour titre «The Social Responses to Technological Change and Environmental Impact».

2) *Canadian Institute for Resources Law*

En février 1983, un atelier de deux jours, organisé conjointement avec le Bureau fédéral d'examen des évaluations environnementales et le Banff Centre, a porté sur l'équité et la justice naturelle en matière d'évaluation environnementale. Le compte rendu des travaux de cet atelier sera publié en 1984. L'Institut organise aussi de temps à autre divers ateliers et colloques sur des sujets qui se rapportent aux évaluations environnementales.

CARLETON UNIVERSITY

Location/Endroit: Ottawa, Ontario

Mailing Address/ Adresse: Carleton University
Ottawa, Ontario
KIS 5B6

TEACHING:

Department of Geography

45.211 (2) GEOMORPHOLOGY AND ENVIRONMENTAL MANAGEMENT

Examination of earth materials, processes and hazards in relation to their physical and socio-economic importance; environmental impacts and the need for land management. Instructors: J.P. Johnson, T.P. Wilkinson.

45.311 (3) ENVIRONMENTAL MONITORING

Designed to instruct students how to carry out field, laboratory and archival investigations needed to understand physical, environmental processes and their role in the origin, history and character of specific sites and environments. Instructors: J.P. Johnson, M.W. Smith.

45.333 (3) LAND USE, REGIONAL DEVELOPMENT AND PLANNING IN CANADA

Introduction to land use planning in Canada, with the chief emphasis on Ontario. The forces affecting land use in Canada, evolution of local and regional planning, the nature of municipal planning, the roles of government in local, regional and national planning, and relationship between conservation, regional developments and land resource planning. Selected Ontario and federal legislation is examined. Instructor: D.M. Anderson.

45.334 (3) RENEWABLE RESOURCE PLANNING IN A LOCAL AREA

A planning-oriented examination of a local river basin, aimed at developing a co-ordinated plan for renewable resource management, utilizing existing local, regional and watershed legislation in Ontario. Students work in project teams, under supervision, to develop a practical plan for land use, water resource management, urban development, recreational space and environmental preservation. Instructor: D.M. Anderson.

45.404 (4) ENVIRONMENTAL IMPACT ASSESSMENT

An examination of the principles, scope and purpose of environmental impact assessment, from conceptual and methodological points of view. The broad range of environmental and socio-economic impacts of development projects are illustrated by case studies. Instructor: M.W. Smith.

45.405 (4) PROBLEMS OF ENVIRONMENTAL IMPACT ASSESSMENT

A project-oriented course in which students apply the principles and methods of environmental impact assessment to selected development projects. Instructors: D.M. Anderson, M.W. Smith.

Technology, Society, Environment Program

59.300 (3) INTRODUCTION TO PROBLEMS OF INDUSTRIAL SOCIETY

A course intended to introduce students from all faculties to the study of major problems of industrialized society. Topics covered include: historical perspective of technology and industrialization, technology as a motive force in history and as an element in culture, population growth, impact of technology on the natural environment (e.g. climate, ecological balances), utilization of renewable and non-renewable resources, current and potential future energy resources, modernization (especially with regard to developing countries), technology as an agent of global integration. Much of the analysis is based on case studies. A group research project is a major part of the course and is given considerable weight in the final grading. Instructors: P. Kruus, J. Lukasiewicz

59.401 (4) TECHNOLOGY AND SOCIETY: ASSESSMENT

The course examines the complexities and practices of evaluating the relationship and impact of technology on society and the physical environment. Specific topics include:

retrospective assessment of large projects; technological horror stories — cases of incorrect assessments; necessary aspects of an assessment project; examples of Canadian technology assessment. Instructor: J. Lukasiewicz.

Department of Law

51.380 (3) LAW OF ENVIRONMENTAL QUALITY

The legal process relating to resource conservation and to the control and abatement of pollution of water, air and land. The common law and statutory remedies through private actions in the ordinary courts; the role of public authorities through coercive techniques such as criminal sanctions, licensing of resource use, licensing of pollution, and direct remedial actions; non-coercive techniques such as subsidies, tax incentives, public works, research and persuasion; land use control techniques such as protecting environmental quality; constitutional division of legislative competence concerning these matters; administrative problems of achieving interjurisdictional co-operation in activities by public authorities. Instructor: D. Good.

INDIVIDUAL RESEARCH AND WORK:

Good, D.R. LAW

Member of Ontario Bar; member of Ontario Institute of Agrologists; contributing editor on environmental law to the *Ottawa Law Review*, which is composed of two parts: general environment and environmental assessment; environmental impact assessment seminar organizer for Corpus Information.

Kruus, P. CHEMISTRY

Editor of *Controversial Chemicals: A Citizens Guide* which describes the historical, scientific, economic and political background of chemicals as they concern the general public.

Smith, M.W. GEOGRAPHY

Advisor to Beaufort Sea Project Environmental Assessment Panel.

Williams, P. GEOGRAPHY

Geotechnical advisor to Alaska Highway Pipeline Environmental Assessment Panel; geotechnical advisor and team leader advising Environmental Assessment Panels and federal government agencies as required, such as the Arctic Pilot natural gas project.

PROGRAM ACTIVITIES:

A. 1) *Technology, Society and Environment Studies*

Students in the courses 59.300 and 59.401 (See above) do multidisciplinary group projects on topics relative to the interaction of technology, society and the environment.

2) *Department of Geography*

The Department offers opportunities for study and research in many facets of EIA/SIA. It also operates the Geotechnical Science Laboratories, which focus on aspects of northern development such as pipeline construction, and has been involved in providing expertise for environmental assessments.

B. EIA Core Program or Streaming?:

Yes. A core program is offered and is co-ordinated by the Department of Geography. The program approaches EIA from the socio-economic and biophysical bases. This program allows students to co-ordinate study programs at the undergraduate level in all associated university departments. At the graduate level, students generally specialize in various aspects of environmental assessment in the appropriate university departments.

C. Activities Related to EIA:

1) Technology, Society, Environment Public Lecture Series include topics related to EIA.

2) Various seminars and presentations on subjects related to EIA are presented by the Department of Geography.

ACTIVITÉS:

A. 1) *Technology Society and Environment Studies*

Les étudiants des cours 59.300 et 59.401 cités plus haut font des projets multidisciplinaires sur des sujets se rapportant à l'interaction de la technologie, la société et l'environnement.

2) *Department of Geography*

Il est possible d'y étudier un grand nombre d'aspects de l'évaluation environnementale et sociale et de

faire des recherches diversifiées dans ce domaine. Le département assure aussi le fonctionnement des laboratoires de sciences géotechniques où l'on s'intéresse particulièrement à des aspects de la mise en valeur du Nord tels que la construction de pipelines, et on a déjà fait appel à sa compétence pour des évaluations environnementales.

B. Programme spécifique aux évaluations environnementales?

On offre un programme structuré qui est coordonné par le département de Géographie et dans lequel l'évaluation environnementale est étudiée du point de vue socio-économique et biophysique. Ce programme permet aux étudiants non diplômés de coordonner les programmes d'étude de tous les départements associés. Les étudiants diplômés se spécialisent généralement dans diverses branches de l'évaluation environnementale enseignées dans les départements.

C. Activités se rapportant aux évaluations environnementales:

1) Série de conférences publiques sur la technologie, la société et l'environnement portant sur des sujets qui se rapportent aux incidences environnementales.

2) Le département de Géographie présente divers séminaires et exposés sur des sujets se rapportant aux incidences environnementales.

CONCORDIA UNIVERSITY

Location/Endroit: Montréal, Québec

Mailing Address/
Adresse: Sir George Williams Campus
1455 de Maisonneuve Blvd. West
Montréal, Québec
H3G IM8

Loyola Campus
7141 Sherbrooke St. West
Montréal, Québec
H4B IR6

TEACHING:

Faculty of Engineering

ENRG C495 (3) ENVIRONMENTAL/SOCIAL IMPACT ASSESSMENT

The objective of the course is to provide a practical perspective on the concepts, principles and process of EIA and SIA, with special emphasis on an important Canadian impact assessment case study or an analysis of a technology. Guest lecturers from government, consulting engineering firms, business and academic communities assist with the analysis of the subjects. Active participation of students in discussion, guided research papers and role playing in simulated panel hearings are central to the teaching/learning process of the course. Instructor: B. Goldsmith.

Department of Geography

GEOG C357 (3) RESOURCE UTILIZATION AND CONSERVATION

The course will examine the resource concept and concepts of conservation, together with the regional approach to resource management. Case studies will include problems in developing particular natural resources. Instructor: J.W. Young.

INDIVIDUAL RESEARCH AND WORK:

Goldsmith, B. SOCIAL ASPECTS OF ENGINEERING

Research on the principles, procedures and application of EIA/SIA; consultant to André Marsan & Associés on the LNG Terminal at Gros Cacouna, Québec; social dimensions of environmental planning; compiling teaching/reading module on EIA/SIA for social aspects of engineering, Concordia University; developing a framework for assessing the impacts of transportation technologies.

PROGRAM ACTIVITIES:

A. None indicated.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA: None indicated.

ACTIVITÉS:

A. Aucunes.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

DALHOUSIE UNIVERSITY

Location/Endroit: Halifax, Nova Scotia

Mailing Address/ Adresse: Dalhousie University
Halifax, Nova Scotia
B3H 3J5

TEACHING:

Institute for Resource and Environmental Studies

ES 5000R (G) INTRODUCTION TO ENVIRONMENTAL STUDIES

This fundamental course is devoted to general study of environmental systems, and to present-day approaches to understanding and solving resource and environmental dilemmas. The lectures give special emphasis to holistic approaches, perceptions, the assessment of environmental hazards and benefit-cost trade-offs. Environmental indicators, monitoring programs, including the use of remote sensing techniques, and various responses to growth phenomena are covered. The second half of the class focuses on risk analysis and social impact assessment. Theoretical approaches are followed by a series of actual case studies. Instructors: F. Cohen, S. Guppy, A. Hanson and staff.

ES 5001B (G) ENVIRONMENTAL ASSESSMENT

The complex nature of environmental impact assessment and decision-making is best examined through case study analysis. Thus lectures serve as a background for the main purpose of the course which is to develop class projects on environmental assessment. These are based on existing experiences and problems of current resource or environmental concern in Canada. Students are expected to meet with government officials, citizen groups and others to assemble the relevant information for a thorough analysis of the problem. This effort is intended to provide students with an exposure to the teamwork required in environmental analysis. Instructors: G. Beanlands and staff.

ES 5200B (G) INTRODUCTION TO ENVIRONMENTAL LAW

Topics include the environmental assessment process, including readings on both the federal and provincial environmental assessment processes and the U.S. National Environmental Policy Act. The course will make no attempt to provide a comprehensive survey of the substantial corpus of Canadian environmental law. The rapidity of change would quickly make much of this knowledge obsolete, and such an overview course would be of little value in developing a sophisticated understanding of the relationship between law and the environment. Instead, the aim is to focus on those issues common to essentially all environmental problems, and to provide an analytical framework that will be generally useful. Instructors: B. Wildsmith, S. Mills.

ES 5110A (G) NATURAL RESOURCE ECONOMICS

Instructor: M. Cross.

INDIVIDUAL RESEARCH AND WORK:

Beanlands, G. INSTITUTE FOR RESOURCE AND ENVIRONMENTAL STUDIES

Environmental assessment methodologies; ecological basis for environmental assessment; ecological content of environmental impact statements.

Brown, A.P. PUBLIC ADMINISTRATION

Policy relating to land use.

Coffey, W.J. INSTITUTE OF PUBLIC AFFAIRS

Local development impacts.

Hanson, A. INSTITUTE FOR RESOURCE AND ENVIRONMENTAL STUDIES

Environmental assessment; bilateral aid and the environment for the International Institute for Environment and Development; environmental research and training in Indonesia.

Harvey, A.S. INSTITUTE OF PUBLIC AFFAIRS

Socio-economic impact; industrial development.

Kasdan, L. INSTITUTE FOR RESOURCE AND ENVIRONMENTAL STUDIES

Monitoring of development activities related to oil and gas exploitation; comparative assessment of New-

	foundland and Nova Scotia approaches to social and economic impact studies; impacts of oil and gas development on three isolated communities.
MacDonald, W.S.	INSTITUTE OF PUBLIC AFFAIRS Socio-economic impacts of development activities; adaptation to structural change.
Mills, S.	FACULTY OF LAW Environmental law; environmental mediation; environmental assessment reporting.
Wildsmith, B.	FACULTY OF LAW Environmental law.
Wood, K.S.	INSTITUTE OF PUBLIC AFFAIRS Regional impacts of offshore hydrocarbons; definition of core social indicators; managing social impacts from large scale industrial complexes, using Norway's experience.

PROGRAM ACTIVITIES:

A. 1) *Institute for Resource and Environmental Studies*

The Master of Environmental Studies (M.E.S.) degree program is at the core of the Institute's activities. The program is designed to provide a professional education in fields such as resource ecology and management, environmental policy and administration, and pollution studies. Particular emphasis is given to understanding environment and development relationships in either Canadian or Third World settings.

2) *Dalhousie Ocean Studies Program*

The Ocean Studies Program is an interdisciplinary research program which examines topics relating to ocean resource development. The areas of enquiry relate primarily to ocean law, ocean policy development and management of ocean resources.

3) *Institute of Public Affairs*

The aim of the Institute is to bring university research resources to bear on the economic and social problems of Canada, and in particular, of the Atlantic region. The Institute takes a multidisciplinary approach to the research it undertakes.

B. EIA Core Program or Streaming?:

No, however, a program is offered to train professionally-oriented, well-rounded graduates in the field of environmental studies. Students are given the opportunity to specialize in the study and research of EIA/SIA at the graduate level through the various institutes, in particular the Institute for Resource and Environmental Studies.

C. Activities Related to EIA:

1) Seminars, conferences and workshops sponsored by the research institutes on campus on subjects related to EIA/SIA.

2) Detailed student team projects which are undertaken by students at the Institute for Resource and Environmental Studies.

3) Co-ordinated research and workshop activities in conjunction with other universities located in Halifax.

ACTIVITÉS:

A. 1) *Institute for Resource and Environmental Studies*

Le programme qui débouche sur une maîtrise en études environnementales (M.E.S.) constitue le noyau des activités de l'Institut. Le programme est conçu pour fournir une formation dans des domaines tels que la gestion et l'écologie des ressources, les politiques relatives à l'environnement et l'administration, et la pollution. On met particulièrement l'accent sur la connaissance de l'environnement et ses rapports avec le développement au Canada ou dans le tiers monde.

2) *Dalhousie Ocean Studies Programme*

Programme de recherche interdisciplinaire sur des sujets qui se rapportent à l'exploitation des ressources de la mer. La recherche porte surtout sur le droit de la mer, l'élaboration des politiques relatives à la mer et la gestion des ressources marines.

3) *Institute of Public Affairs*

L'Institut a pour but l'utilisation des ressources de l'université dans le domaine de la recherche pour étudier les problèmes socio-économiques du Canada en général et de la région de l'Atlantique en particulier. Les travaux de recherche qu'il entreprend ont un caractère multidisciplinaire.

B. Programme spécifique aux évaluations environnementales?

Non, cependant, un programme est offert qui a pour but de former des diplômés en études environnementales qui soient compétents et dont la formation débouche sur une profession. Les différents instituts, en particulier l'Institut des ressources et des études environnementales, permettent aux étudiants diplômés de se spécialiser en évaluation environnementale et sociale et de faire des recherches dans ce domaine.

C. Activités se rapportant aux évaluations environnementales:

1) Séminaires, conférences et ateliers sur des sujets se rapportant aux évaluations environnementales et sociales, organisés à l'université par les instituts de recherche.

2) Projets détaillés entrepris en équipe par les étudiants de l'Institut des ressources et des études environnementales.

3) Travaux de recherche et d'atelier réalisés conjointement avec d'autres universités qui se trouvent à Halifax.

ÉCOLE POLYTECHNIQUE DE MONTRÉAL

Location/Endroit: Montréal, Québec

Mailing Address/ Adresse: Campus de l'Université de Montréal
Case postale 6079
Succursale 'A'
Montréal, Québec
H3C 3A7

COURS:

1.528 (4) ENVIRONNEMENT

(niveau baccalauréat)

Hygiène des milieux: conception d'une installation septique, normes. Les déchets solides: décharge contrôlée, compostage, incinération, pyrolyse. La pollution atmosphérique: nature, sources et mesures des polluants, remèdes. Impacts des projets sur l'environnement: concepts, techniques d'évaluation et étude de cas. Pollution par le bruit: mesure, sources, effets du bruit, lutte contre le bruit. Notions écologiques: rupture des écosystèmes et effets des polluants toxiques (métaux lourds, pluies acides). Coordonnateur: C.E. Delisle.

1.6286 (G) IMPACTS DES PROJETS SUR L'ENVIRONNEMENT

(niveau maîtrise)

Principes directeurs et rapport environnemental. Ecologie humaine et étude de cas. Evaluation des données écologiques et écologie appliquée aux études d'impact. Aspect économique. Aspect légal. Projet d'aménagement, phases techniques et objectifs des activités relatives à l'environnement. La matrice d'impacts et ses paramètres. Techniques d'identification et d'évaluation des impacts. Techniques Léopold et al., Batelle, Sorensen, Odum, Holmes, McHorg, etc. Modélisation: modèles écologiques, modèles fluviaux. Simulation écologique aquatique. Etude de cas. Coordonnateurs: A.J. Drapeau, C.E. Delisle.

PE.410 (4) ÉCOLOGIE APPLIQUÉE POUR INGÉNIEURS

(niveau baccalauréat)

Notions générales d'écologie. Structure et fonctionnement de la biosphère. Dynamique des populations et des écosystèmes. Relations entre environnements physiques, chimiques et biologiques. Indicateurs biologiques. Réseaux de surveillance de pollution de la biosphère. Flux d'énergie dans les écosystèmes. Applications de l'écologie à l'ingénierie. Quantification des phénomènes écologiques. La surexploitation des ressources naturelles et la limite de la biosphère. Cas types d'impacts écologiques. Effets écologiques des impacts et contaminants sur le milieu et l'homme. Coordonnateur: C.E. Delisle.

1.6991 (G) SÉMINAIRES — ENVIRONNEMENT

(niveau maîtrise)

Exposés et discussions de sujets choisis en rapport avec les cours ou les travaux de recherches de la Section du génie de l'Environnement. Discussions de publications récentes. Les séminaires seront à orientation écologique. Conférenciers et présentations individuelles. Coordonnateur: C.E. Delisle.

RECHERCHE ET TRAVAUX PERSONNELS:

Delisle, C.E. Étude des répercussions environnementales de l'extension du port de Québec; études des répercussions sur l'environnement de l'ouvrage de contrôle sur la rivière des Mille Iles; études des répercussions environnementales: aménagement portuaire Leslie, Iles-de-la-Madeleine: Etude d'impact sur l'écosystème marin, composition et mouvement des populations de homards.

Drapeau, A.J. Directeur scientifique régional de la publication *Revue française des sciences de l'eau.*

ACTIVITÉS:

A. 1) *Centre d'ingénierie nordique de l'École Polytechnique*

Organisme de recherche pluridisciplinaire et interuniversitaire qui regroupe des ingénieurs oeuvrant dans plusieurs domaines, ainsi que des spécialistes des sciences humaines qui s'intéressent au développement socio-économique du Nord, à l'exploitation rationnelle de richesses naturelles, à la mise en oeuvre de grands ouvrages et à l'établissement physique des agglomérations nordiques, y compris les approvisionnements hydriques et énergétiques.

2) *Section du génie de l'environnement*

Dans ce qui est offert par cette section de l'École, on essaie de donner aux étudiants en génie une expérience pratique des problèmes de génie de l'environ-

nement. Il existe des liens très étroits entre l'École et des organisations professionnelles comme les sociétés d'experts-conseils et d'exploitation qui fournissent aux étudiants l'occasion d'être confrontés à des problèmes réels lors des cours pratiques et des travaux de recherche.

B. Programme spécifique aux évaluations environnementales?

Non. Ce qui est offert a pour but principal de servir d'introduction aux cours professionnels de génie de l'environnement.

C. Activités se rapportant aux évaluations environnementales:

1) En plus de ce qui précède, l'École commandite une série annuelle de séminaires auxquels participent le personnel, les étudiants et les chercheurs du gouvernement et de l'industrie. Les documents sont ensuite réunis, révisés et publiés annuellement sous forme de volume dont les sujets se rapportent à l'évaluation et au génie de l'environnement.

2) Plusieurs membres de l'École participent à la publication d'une revue de recherche intitulée *Revue française des sciences de l'eau*.

PROGRAM ACTIVITIES:

A. 1) *Centre d'ingénerie nordique de l'Ecole Polytechnique*

The Centre is, in fact, a multidisciplinary and interuniversity research agency which includes engineers working in several fields and specialists in the social sciences. The chief areas of work are: socio-economic development in North, the rational use of natural resources, construction of large-scale projects and the physical establishment of northern communities, including their water and energy supply.

2) *Section du génie de l'environnement*

The programme offered by this part of the school attempts to give engineering students "hands-on" experience with regard to environmental engineering problems. A very close relationship exists between the school and professional organizations such as consulting firms and development companies, which allows students the opportunity to grapple with "real-world" problems during practical sections of courses and during research.

B. EIA Core Program or Streaming?:

No. The program is designed primarily as an introduction to professional environmental engineering.

C. Activities Related to EIA:

1) Aside from the close ties the school has with the resources community, the school sponsors an annual series of seminars by staff, students, government, and industry researchers. The papers are collated and edited and published in a yearly volume of subjects relating to assessment and environmental engineering.

2) Many members of the school are involved in the publication of a research journal, *Revue française des sciences de l'eau*.

UNIVERSITY OF GUELPH

Location/Endroit: Guelph, Ontario

Mailing Address/ Adresse: The University of Guelph
Guelph, Ontario
N1G 2W1

TEACHING:

Department of Geography

45.311 (3) BIOPHYSICAL ENVIRONMENTAL RESOURCES

Atmospheric, pedalogic and biotic resources of the earth are examined. This is done in the context of major biotic environments. Total organic productivity is considered. Man's impact, both planned and inadvertent, on a number of contrasted biophysical components in different environments is examined. Instructor: M. Moss.

45.321 (3) MANAGEMENT OF THE BIOPHYSICAL ENVIRONMENT

Issues in the relationship between man and his biophysical environment. The course aims to develop an understanding of basic concepts and methods in resource management and apply these to contemporary resource and environmental problems. Emphasis is on the economic, social and environmental implications of man's development, use and management of biophysical resources, with particular reference to Canada and Ontario. The course examines resource problems management and assessment methodologies from a human ecological perspective which emphasizes the relationship between the biophysical environment and man's technology, perceptions and attitudes, and institutional arrangements. Instructor: R. Kreutzwiser.

45.628 (G) RURAL ENVIRONMENTAL RESOURCES

Analysis and management of rural non-agricultural resources. Emphasis is on concepts and techniques for the biophysical and socio-economic analysis of environmental resources. Topics include biophysical land classification, environmental impact assessment and landscape assessment. Instructors: M. Moss and R. Kreutzwiser.

45.628 (G) RURAL ENVIRONMENTAL RESOURCES

Analysis and management of rural non-agricultural resources. Emphasis is upon techniques for the biophysical and socio-economic analysis of particular environments such as forests, wetlands and shorelines. Instructors: M. Moss and R. Kreutzwiser.

85.400 (4) RESEARCH PROJECT IN ENVIRONMENTAL STUDIES

This is a directed research paper course required of all senior students in the Environmental Studies Minor Program, and provides an opportunity for students to formulate and investigate an issue of current environmental concern.

45.411 (4) ENVIRONMENTAL SYSTEMS ANALYSIS

An integrated approach to the evaluation and modelling of environmental systems. This course emphasizes the prediction of environmental impact and its broad geographical implications. The concepts and principles of systems analysis are applied to land, hydrologic and atmospheric systems with a view to enhancing capability to anticipate environmental impacts. Instructor: J. FitzGibbon.

45-604 (G) METHODS OF REGIONAL ANALYSIS

Techniques of regional analysis are necessary for the understanding and assessment of social and environmental problems, and for policy formulation. This course demonstrates the nature and use of several methods of measurement and analysis that have wide application to regional-scale problems. Included are regional multiplier analysis, economic impact analysis, resource assessment methods, and social impacts of public services and facility location. Instructors: B. Smit and A. Joseph.

Department of Land Resource Science

87.250 (2) PROBLEM SOLVING IN LAND RESOURCE SCIENCE

An introduction to basic skills of problem solving and report prepara-

tion. Included will be approaches to the framing of research projects, techniques for problem analysis, and appropriate formats for presentation of reports, both oral and written. The use of information sources, data bases and data retrieval systems in land resource science will be emphasized.

87.310 (3) RESOURCES PLANNING AND MANAGEMENT

An introduction to solving resource-type problems using a systematic approach to defining and outlining the objectives of a problem, construction of a model outlining alternative approaches to the problem and defining techniques used in conjunction with the model.

87.415 (4) DECISION-MAKING IN RESOURCE MANAGEMENT

An introduction into the methods of integrating and analysing data generated in multi-disciplinary projects in arriving at solutions to resource problems.

School of Rural Planning and Development.

950631 (G) ENVIRONMENTAL IMPACT ASSESSMENT

This course deals with the role of environmental impact assessments and statements in the planning, development, and operation of resource projects. Topics discussed include the philosophical and institutional bases for environmental impact assessments, and the effects of such assessments on resource development projects. Instructor: J. FitzGibbon.

INDIVIDUAL RESEARCH AND WORK:

Davidson -Arnott, R. GEOGRAPHY

Geomorphic processes and impact assessment; shoreline modification.

FitzGibbon, J.E. SCHOOL OF RURAL PLANNING AND DEVELOPMENT

Evaluation of man's impact on the biophysical and socio-economic environment of rural areas including land, water and forest resources; rural land conversion; service provision; and technological change.

Hilts, S. SCHOOL OF RURAL PLANNING AND DEVELOPMENT

Environmental impact analysis; performance of environmental assessments.

Joseph, A. GEOGRAPHY

Social impacts of public services and facility location.

Kreutzwiser, R. GEOGRAPHY

Environmental policy evaluation; resource evaluation; impact of outdoor recreation.

Moss, M. GEOGRAPHY

Process approach to biophysical land classification; biotic resource evaluation and development impact.

Nickling, W. GEOGRAPHY

Geomorphic processes and impact assessment; soil erosion.

Smit, B.E. GEOGRAPHY

Land evaluation and rural land use planning; impacts of urban growth; community services development.

Wolfe, J.S. GEOGRAPHY

Community involvement in land use planning for rural areas; public participation.

PROGRAM ACTIVITIES:

A. 1) *Environmental Studies Minor Honours Program*

This is an interdisciplinary option in the B.A. program designed to provide students with an opportunity to develop an understanding of the human and biophysical roots of environmental problems. The program consists of a minimum of 10 semester courses, with a required core of 5 biological (ecology) and social science courses, and a minimum of 5 elective courses in botany, zoology, land resource science, economics, geography, sociology, political studies and landscape architecture. A number of courses in the program deal, in part, with EIA and SIA or provide a basis for impact assessment. The program is administered by the Department of Geography.

2) *School of Rural Planning and Development*

The Land Evaluation Group aims to develop and apply procedures for assessing land for alternative uses. Much of the group's activity has been devoted to developing and applying a computer-based land

evaluation model to issues such as the impact of urban expansion on future needs for agricultural land and the effects of alternative erosion control policies on agricultural production.

3) *Department of Geography*

Much of the research in the Department of Geography focuses on the assessment of environmental and social impact in rural areas.

B. *EIA Core Program or Streaming?*

This may be carried out through the interdisciplinary resource development program involving geography, landscape architecture, agricultural economics, land resource science as well as other departments.

C. *Activities related to EIA:*

Both the Department of Geography and the School of Rural Planning and Development have been involved in several studies looking at environmental and social impact of government policy in the areas of land use control and land development.

ACTIVITÉS:

A. 1) *Environmental Studies Minor Honours Program*

Études interdisciplinaires au niveau du B.A. qui permettent aux étudiants de mieux connaître les causes humaines et biophysiques des problèmes environnementaux. Elles consistent en un minimum de 10 cours par semestre, dont cinq cours obligatoires en biologie (écologie) et en sciences sociales et un minimum de cinq cours optionnels en botanique, en zoologie, en sciences de la Terre, en économie, en géographie, en sociologie, en politique et en architecture paysagiste. Un certain nombre de cours portent, en partie, sur l'évaluation environnementale et sociale ou servent de préparation à l'évaluation des incidences. C'est le département de Géographie qui est responsable de ce programme.

2) *School of Rural Planning and Development*

Le groupe de l'évaluation des terres s'efforce de développer et d'appliquer des procédures pour évaluer les terres pour usages alternatifs. Les activités du groupe ont été consacrées au développement et à l'application d'un modèle informatisé d'évaluation des terres aux questions de l'impact de l'expansion urbaine sur les besoins futurs des terres agricoles et les effets des politiques du contrôle alternatif de l'érosion sur la production agricole.

3) *Department of Geography*

La plupart des travaux de recherche portent sur l'évaluation des impacts environnementaux et sociaux dans les régions rurales.

B. Programme spécifique aux évaluations environnementales?

Le programme interdisciplinaire en développement des ressources comprenant la géographie, l'architecture paysagiste, l'économie agricole, la science de l'utilisation des terres, ainsi que d'autres départements se rapporte spécifiquement aux évaluations environnementales.

C. Activités se rapportant aux évaluations environnementales:

Le département de geographie et l'école de la planification rurale et du développement urbain ont été impliqués dans plusieurs études concernant les impacts environnementaux et sociaux de la politique gouvernementale dans le domaine du contrôle de l'utilisation et du développement des terres.

LAKEHEAD UNIVERSITY

Location/Endroit: Thunder Bay, Ontario

Mailing Address/
Adresse: Lakehead University
Thunder Bay, Ontario
P7B 5E1

TEACHING:

Department of Geography

GEOG 3301 (3) ENVIRONMENTAL GEOMORPHOLOGY

An examination of applied geomorphological studies in selected fields and their use in determining the physical impact of man's activities and assessing environmental quality.

GEOG 3301 (3) ENVIRONMENTAL CLIMATOLOGY

An examination of applied climatological studies and their use in determining the physical impact of man's activities and assessing environmental quality.

GEOG 3411 (3) RESOURCE GEOGRAPHY

GEOG 3431 (3) THE GEOGRAPHY OF ENERGY

Both of these courses contain elements dealing with the assessment of the environmental impact of energy and mineral resource development.

School of Engineering

ENG 0530 (4) ENERGY CONVERSION AND ENVIRONMENTAL EFFECTS

Advanced reactor systems; coal technology; fusion breeder reactors; biomass; energy storage. Management of radioactive and thermal wastes; environmental effects of energy transmission and distribution; comparison of the environmental effects of different energy systems. Instructor: R.G. Rosehart.

ENG 0136 (4) ENVIRONMENTAL CONTROL

The physical, chemical and biological basis of water and waste treatment and disposal. Solid waste disposal methods, economics and recycle possibilities. Fundamental aspects of noise and odour control. Instructor: R.G. Rosehart.

Note: EIA is addressed in each of the two above engineering courses. Aside from consideration of process and methodology, emphasis is placed on the social and environmental responsibility of an engineer.

INDIVIDUAL RESEARCH AND WORK:

Philips, B.A.M. GEOGRAPHY

The morphological impact of the Neebing/McIntyre Flood Control Project in Thunder Bay; effects of urbanization on fluvial processes; the provision of background earth-science information for the Ontario Ministry of Natural Resources study for the development of Ouimet Canyon and Cavern Lake Provincial Parks.

Raisid, H. GEOGRAPHY

The morphological impact of the Neebing/McIntyre Flood Control Project in Thunder Bay; effects of urbanization on fluvial processes.

Rosehart, R.G. ENGINEERING

Consultations on EIAs, as well as participation in public consultation processes associated with EIAs.

PROGRAM ACTIVITIES:

A. None indicated.

B. EIA Core Program or Streaming?: None indicated.

C. Activities related to EIA: None indicated.

ACTIVITÉS:

A. Aucunes.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

LAURENTIAN UNIVERSITY

Location/Endroit: Sudbury, Ontario

Mailing Address/ Adresse: Laurentian University
Ramsey Lake Road
Sudbury, Ontario
P3E 2C6

TEACHING:

Department of Geography

GEOG 4106E (4) APPLIED GEOMORPHOLOGY

This course deals with the application of geomorphic principles in environmental planning and management and the practical use of geomorphology for the solution of problems where man wishes to transform landforms or to use and change surficial processes. Particular attention is focused on the study of geomorphic processes that affect man, such as floods and landslides, and man's utilization of geomorphic agents or products such as water, sand, or gravel, as resources. Instructor: J.R. Pitblado.

GEOG 4107E (4) LAND AND RESOURCES AND THEIR EVALUATION

A systematic examination of the characteristics, distribution and land use of soils and related land resources. Special attention will be given to the evaluation of these resources (land capability analysis) for the purposes of rural land management. Instructor: J.R. Pitblado.

INDIVIDUAL RESEARCH AND WORK:

None indicated.

PROGRAM ACTIVITIES:

A. None indicated.

B. EIA Core Program or Stream: None indicated.

C. Activities related to EIA: None indicated.

ACTIVITÉS:

A. Aucunes.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

UNIVERSITÉ LAVAL

Location/Endroit: Québec, Québec

Mailing Address/
Adresse: Université Laval
Cité Universitaire
Québec, Québec
G1K 7P4

COURS:

Département de génie civil

GCI-62994 (2) IMPACTS DES PROJETS SUR L'ENVIRONNEMENT

Cadre législatif des études d'impact au Canada et au Québec. Initiation aux techniques d'évaluation des répercussions environnementales. Revue des principes et méthodes de l'écologie appliquée à l'évaluation des impacts. Etudes de cas types sur de projets en cours. Coordonnateur: J.B. Sérodes.

Aménagement du territoire et développement régional

AME 62738 (G) SOCIOLOGIE DE L'AMÉNAGEMENT

Planification et société: conditions d'émergence de la planification urbaine et régionale; les doctrines d'aménagement et d'urbanisme; modèles de planification; rationalisation et intervention étatique; méthode d'analyse sociologique de l'aménagement. Études de cas: le Bureau d'aménagement de l'est du Québec (BAEQ) et le Tennessee Valley Authority (TVA); les villes nouvelles; la rénovation urbaine aux États-Unis; les plans français, etc. Coordonnateur: L. Guay.

AME-62828 (2) AMÉNAGEMENT ET ENVIRONNEMENT

Les problèmes de l'environnement physique et humain étudiés dans le contexte de l'aménagement du territoire et du développement régional. Dégradations de l'environnement et étude systématique des pollutions. Développement économique et conservation. Processus de la planification. Contraintes et blocages. Exemples québécois, canadiens, européens et africains. Coordonnateur: M. Maldague.

AME-62832 (2) GESTION DE L'ENVIRONNEMENT TROPICAL

Problèmes généraux des régions tropicales. Gestion des ressources naturelles: eaux, sols, forêt. Systèmes de production. Stratégie du développement intégré. Santé et hygiène; énergie. Feux de brousse, surpâturage et surculture. Environnement et développment. Organisations internationales. Education mésologique appliquée. Problème de la désertification. Parcs nationaux et réserves de la biosphère. Problèmes d'actualité. Coordonnateur: M. Maldague.

AME-63141 (3) LES BASES BIOPHYSIQUES DE L'AMÉNAGEMENT DU TERRITOIRE

Problèmes d'utilisation du sol et de l'aménagement du territoire au Québec méridional, notamment dans les zones marginales, les région touristiques et les zones de frange périurbaine. Systèmes de classement des sols selon leurs possibilités agricoles, récréatives, forestières et fauniques. Méthodes d'intégration des données et la confection de cartes de zonage biophysique. Analyse en profondeur d'un cas d'étude (région Mirabel). Excursions dans la région de Québec et travaux d'équipes sur des cas concrets. Coordonnateur: P. Clibbon.

Département de géographie

GGR-10605 ( ) UTILISATION DU SOL

Conscientisation du gaspillage des ressources naturelles au Québec. Conscientisation des liens entre le pillage des ressources naturelles du tiers-monde et l'utilisation des sols du Québec. Connaissance des systèmes de classement des terres généralement utilisés au Canada. Connaissance des relations entre l'étude du milieu bio-physique et les potentiels pour diverses ressources naturelles renouvelables. Introduction à la notion d'éco-développement. Conscientisation de la nécessité d'une participation des citoyens aux décisions relatives à l'utilisation du sol. Coordonnateur: M. Jurdant.

GGR-60441 (G) INVENTAIRE DU CAPITAL-NATURE

Initiation à la méthode québecoise d'inventaire écologique du territoire. Mise en application pratique et concrète de cette méthode dans le territoire de l'agglomération de Québec. Recherche collective et interdisciplinaire sur les applications de l'inventaire du capital-nature pour l'aménagement du territoire. Mise au point d'une méthodologie de caractérisation des écosystèmes urbains. Coordonnateur: M. Jurdant.

Département de sociologie

SOC 14946 ( ) ENVIRONNEMENT ET SOCIÉTÉ

Étude des rapports symboliques et techniques entre nature et société. 1. Histoire de l'idée de la nature: l'idée de conquête de la nature, développement; l'écologie politique. 2. Courants naturalistes en sciences humaines. Coordonnateur: L. Guay.

RECHERCHE ET TRAVAUX PERSONNELS:

Guay, L. SOCIOLOGIE

L'écologisme du paradigme aux valeurs. Représentation et aménagement.

Guertin, P.S. CENTRE DE RECHERCHES EN AMÉNAGEMENT ET EN DÉVELOPPEMENT

Sensibilisation et attitudes de riverains face à l'environnement d'un lac, (lac St-Joseph, Québec).

Jurdant, M. GÉOGRAPHIE

Méthodes de classification écologique à grande échelle dans les territoires écologiquement sensibles; méthode de caractérisation écologique des écosystèmes urbains; analyse des mouvements sociaux et politiques en relation avec l'écologie.

Maldague, M. CENTRE DE RECHERCHES EN AMÉNAGEMENT ET EN DÉVELOPPEMENT

Impacts de l'utilisation du bois de chauffage en milieu tropical rural.

Migneron, J.G. CENTRE DE RECHERCHES EN AMÉNAGEMENT ET EN DÉVELOPPEMENT

Impact du bruit des autoroutes et des grands projets de développement.

Sérodes, J.-B. GÉNIE CIVIL

Etude de la sédimentation intertidale de l'estuaire moyen du Saint-Laurent; acquisition de données de base sur les processus sédimentaires et le pouvoir de transformation des polluants et des nutriments par les zones intertidales; expertise dans l'étude des impacts bio-physiques concernant l'extension du Port de Québec et divers projets de dragage; méthodologie d'étude des impacts physiques sur les estuaires des rivières nordiques du Québec à la suite de leur aménagement hydro-électrique.

Villeneuve, P.
Jurdant, M.
DeKoninck, R. GÉOGRAPHIE

«Ecoville»: genres de vie, énergie et organisation spatiale dans la région urbaine de Québec. Les objectifs sont: (1) Reproblématiser la notion de genres de vie de façon à la rendre opératoire pour l'étude du milieu urbain des sociétés industrielles avancées. (2) Interpréter les quartiers de la région urbaine de Québec en tant qu'écosystèmes, c'est-à-dire comme combinaisons spécifiques de genres de vie et de potentiels bio-physiques. (3) Construire un simulateur spatial sur ordinateur permettant d'évaluer l'impact des projets et des scénarios d'aménagement prévus dans la région urbaine de Québec. (4) Publier une série de plaquettes informant les citoyens de la région sur les rapports existant entre les genres de vie et le milieu bio-physique.

ACTIVITÉS:

A. 1) *Département de génie civil*

Le programme a comme sujet principal les conséquences des projets sur l'environnement. Il a pour but de faire connaître aux étudiants en génie les aspects dont il faut tenir compte lors de la conception et de la réalisation des projets pour que ces derniers ne comportent pas de risques.

2) *Département de géographie*

Les membres du département abordent la question de l'évaluation environnementale du point de vue de la mesure des divers facteurs qui doivent être pris en considération pour que les projets importants soient mis en oeuvre en respectant le plus possible l'environnement. «Éco-développement» et «intervention écologique» sont des notions très importantes employées pour l'étude de l'exploitation.

3) *L'aménagement des territoires et le développement régional*

L'évaluation des incidences environnementales et sociales dans l'aménagement des terres et le développement régional est étudiée dans le contexte de la planification écologique. Les étudiants se familiarisent avec les différentes façons de mesurer les ressources biophysiques ainsi qu'avec les conflits d'utilisation inhérents à la mise en valeur de ces ressources.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

PROGRAM ACTIVITIES:

A. 1) *Département de génie civil*

The effect of projects on the environment is the major area of study related to EIA. The program is designed to give engineering students an understanding of the considerations that must be taken into account in the design and operation of projects, and for their safe operation.

2) *Département de géographie*

The approach taken by members of the Department to EIA is in terms of the measurement of the various factors which must be taken into account for the most ecologically sound development of major projects. The concepts of "eco-development" and "Ecological intervention" play a significant role in the way in which development is studied.

3) *L'aménagement des territoires et le développement régional*

EIA with regard to land management and regional development is examined in the context of environmental planning. Students are exposed to various ways of measuring biophysical resources, and the use conflicts inherent in their development.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA: None indicated.

McGILL UNIVERSITY

Location/Endroit: Montréal, Québec

Mailing Address/ Adresse: McGill University
845 Sherbrooke West
Montréal, Québec
H3A 2T5

TEACHING:

Department of Anthropology

150-446B (4) APPLYING ANTHROPOLOGY: THE DIALECTIC OF THEORY AND DATA

Students read the work of applied anthropologists (including social impact studies) to see how applied methodology differs from theoretical research. They conduct, under supervision, one study evaluating the effectiveness or impact of a local development. Instructor: R.F. Salisbury.

151-634D (G) ANTHROPOLOGY OF DEVELOPMENT

Graduate Seminar. Discussion of theories of development, and of how major social change impacts local populations in Canada and in the Third World. Instructor: R.F. Salisbury.

School of Urban Planning

409-603D (G) PLANNING PROJECTS I (STUDIO)

This studio introduces students to practical problems based on actual cases. Instructors: J. Wolfe, D.F. Farley and staff.

409-604A (G) PLANNING PROJECTS II

The second year is designed to permit the study of planning problems in depth. Problems are chosen depending on the experience and research interests of the participants, or for their topical nature. Instructors: D. Brown and staff.

409-610/611 (G) MAN AND ENVIRONMENT I AND II

The purpose of these courses is to expose students to the broad range of principles and practices which are employed by planning professionals in the solution of diverse practical planning problems. Instructor: Staff and visitors.

409-614B (G) URBAN ENVIRONMENTAL PLANNING

Examination and evaluation of methodologies pertaining to the assessment of environmental impact in the urban context and the integration of diverse environmental elements directly within the urban planning process. Consideration is given to both theoretical and practical issues. The quality of recent professional reports is assessed. Instructor: D. Brown.

Department of Geography

183-503B (G) ENVIRONMENTAL IMPACT EVALUATION

Theory and methods. A study of the development and application of environmental impact evaluation, noting the theoretical basis and practical shortcomings of various methodologies. Emphasis on the means of accurately assessing impacts on physical systems and evaluating the significance of those impacts in terms of human usage of the affected systems. Instructor: T. Meredith.

Centre for Northern Studies and Research

197-604A (G) NORTHERN ECOLOGY AND RENEWABLE RESOURCES

Structure and function of northern ecosystems; plant and animal distributions, seasonality, migrations; fish and fisheries—present and potential exploitation; marine and terrestrial mammals—game management and the fur industry; principles and practice of environmental impact assessment case studies.

Department of Renewable Resources, Macdonald College

375-437B (4) ASSESSING ENVIRONMENTAL IMPACT

The theories and procedures of various methods of assessing environmental impact. An examination of the environmental impact statements to examine the accuracy with which they were able to predict the consequences and attenuate undesirable effects. Instructor: J.Doucet.

372-325B (3) PRINCIPLES OF LAND PLANNING

A study of the principles involved in land planning. Includes an historical review, discussion of ecological, social, economic, political and legal factors involved in making decisions for the best and most appropriate use of land.

Department of Agricultural Economics, Macdonald College

334-333A (3) RESOURCE ECONOMICS

To develop an understanding of the role of resources in the environment, use of resources, and management of economic resources within a firm or organization. Problem solving, case studies involving private and public decision-making in organizations are utilized. Instructor: L.B.B. Baker.

INDIVIDUAL RESEARCH AND WORK:

Bider, R. RENEWABLE RESOURCES

Evaluation of caribou resources of the Caniaspicau area prior to the closing of the Caniaspicau dike, for La Société Énergie de la Baie James; evaluation of the wildlife habitat mitigation programs undertaken in the LG-2 reservoir, for La Société Energie de la Baie James.

Brown, D. SCHOOL OF URBAN PLANNING

An analysis of the physical and social effects of a rapid rail system in an urbanized area, on contract to Le Conseil de transport de la région de Montréal, 1980.

Doucet, J.G. RENEWABLE RESOURCES

Study of the impacts of hydro rights of way upon animal activity, especially upon winter yards of the white-tailed deer.

Meredith, T. GEOGRAPHY

Assessment of the requirements for cross-cultural EIA.

Salisbury, R.F PROGRAM IN THE ANTHROPOLOGY OF DEVELOPMENT

Impact of Development of Ross River, Yukon: report used in community consultation; SIA in mining engineering developments; *Decentralizing Development*, a review of 10 years of experience with the effects of the James Bay project, and its reviewing processes; the social impact of the Nottaway-Broadback-Rupert hydro development in northern Québec for SEBJ; SIA of Laluai River Hydroelectric Project, Bougainville, Papua New Guinea.

PROGRAM ACTIVITIES:

A. 1) *School of Urban Planning*

The objective of the School is to produce qualified professional urban planners for the public and the private sectors. The School's activities address such topics as: control of the use of land, design of the urban environment, including transportation and communication networks, protection and enhancement of the natural environment, and the political decision-making process.

2) *Minor Program in Environmental Studies*

The philosophy behind the minor is that students with specific training in an "home" department can form the necessary links with other disciplines through the minor program in the study of various aspects of environmental problems.

3) *Centre for Northern Studies and Research*

The Centre was established to encourage and to coordinate the planning of research at McGill University into socio-economic and environmental problems of the North. The graduate diploma in northern studies is part of the program offered by the Centre. Apart from its facilities on McGill campus proper, the Centre operates a subarctic research station at Shefferville, and an Arctic field station on Axel Herberg Island, N.W.T.

4) *Macdonald Campus*

The Faculty of Agriculture is centred at Macdonald College in Ste. Anne de Bellevue. In particular, members of the Department of Renewable Resources Development are involved in the teaching and research of subjects related to SIA. Also located on campus is the *Brace Research Institute for Appropriate Technology*.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA:

1) The Program in the Anthropology of Development coordinates research studies and contracts by staff and students in development, particularly in the Canadian North. Most studies evaluate past projects. On the basis of them a smaller number of prospective studies are undertaken.

2) Professional development seminars are organized by the Department of Mining Engineering which often address subjects that relate to SIA.

3) The Centre for Northern Studies and Research organizes seminars on topics related to the effects of northern development or northern society.

ACTIVITÉS:

A. 1) *School of Urban Planning*

L'école a pour objectif de former des planificateurs urbains professionnels et qualifiés pour les secteurs publics et privés. On y enseigne des sujets tels que le contrôle de l'utilisation des terres, la conception de l'environnement urbain, y compris les réseaux de transport et de communications, la protection et la mise en valeur de l'environnement naturel, et le processus décisionnel politique.

2) *Minor Programme in Environmental Studies*

L'idée maîtresse de ce programme est que les étudiants qui y participent, tout en acquérant une formation spécialisée dans un département, puissent établir les rapports nécessaires avec d'autres disciplines au cours de l'étude des différents aspects des problèmes environnementaux.

3) *Centre for Northern Studies and Research*

Le Centre a été créé pour encourager et coordonner, à l'université McGill, la planification de la recherche relative aux problèmes socio-économiques et environnementaux du Nord. Il offre un programme qui débouche sur un diplôme en études nordiques. En plus de posséder des installations sur le campus même de l'université McGill, le Centre exploite une station de recherche subarctique à Shefferville ainsi qu'une station régionale arctique sur l'île Axel Herberg, dans les Territoires du Nord-Ouest.

4) *Macdonald Campus*

La faculté d'Agriculture se trouve au collège Macdonald, à Sainte-Anne-de-Bellevue. En particulier, les membres du département de la Mise en valeur des ressources renouvelables s'occupent d'enseignement et de recherche sur des sujets se rapportant à l'évaluation des incidences sociales. Le *Brace Research Institute for Appropriate Technology* se trouve aussi sur le campus du Collège.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales:

1) Le programme dans le cadre le l'anthropologie du développement coordonne les études de recherche et les contrats par le personnel et les étudiants dans le domaine du développement, particulièrement dans le nord canadien. La plupart des études évaluent des projets complétés. En se basant sur ces études, un petit nombre d'études éventuelles sont entreprises.

2) Le département de Génie minier organise des séminaires de perfectionnement professionnel qui portent souvent sur des aspects de l'évaluation des incidences sociales.

3) Le Centre d'études et de recherches nordiques organise des séminaires sur des sujets qui se rapportent aux répercussions de la mise en valeur du Nord sur les habitants du Nord.

McMASTER UNIVERSITY

Location/Endroit: Hamilton, Ontario

Mailing Address/ Adresse: McMaster University
Hamilton, Ontario
L8S 4L8

TEACHING:

Department of Geography

GEOG 413 (4) ENERGY AND ENVIRONMENTAL MODELLING

Analytical approaches to regional energy and environmental problems with a review of models and their application. Instructor: S.C. Lonergan.

GEOG 722 (G) TOPICS IN ENERGY AND ENVIRONMENTAL SYSTEMS

Models of energy and environmental systems with particular application to the social sciences, including simulation/optimization, linkages, strategic models and world energy models. Instructor: S.C. Lonergan.

Canadian Studies Program

CDN ST2B3 (2) NATIVE PEOPLES AND NORTHERN SETTLEMENTS

A study of the history of northern peoples and recent changes in their economic, political, social and cultural relations with the rest of Canada. EIA/SIA component approximately 18 hours. Instructors: R. Preston, P. George.

(Note: See TASO Program below in Program Activities)

INDIVIDUAL RESEARCH AND WORK:

Drake, J.J. GEOGRAPHY

Environmental impacts of mining in subarctic areas; urban stormwater impacts.

Ford, D.C. GEOGRAPHY

Uranium in groundwaters; RADWASTE disposal; karst systems.

George, P.J. ECONOMICS/TASO

Technology assessment in subarctic Ontario; economic impact.

Hall, F.L. GEOGRAPHY/CIVIL ENGINEERING

Effects of road traffic, aircraft and rail line noise on residential environments.

Hall, R.H. BIOCHEMISTRY

Using Kitchener-Waterloo as an example, developed a study model to demonstrate the causes and effects of pollution and other adverse environmental impacts within an urban setting, and then to show how they can be minimized.

Kershaw, K.A. BIOLOGY/TASO

Technology assessment in subarctic Ontario.

Lonergan, S.C. GEOGRAPHY

Assessing the regional impact of large scale energy systems; modelling the economic, environmental and social impacts of energy investment policies.

McCann, S.B. GEOGRAPHY

Member of Arctic Land Use Research Advisory Committee of the federal Department of Indian Affairs and Northern Development; coastal zone assessment and mapping.

Muller, R.A. ECONOMICS/TASO

Technology assessment in subarctic Ontario; economic impacts.

Preston, R.J. ANTHROPOLOGY/TASO

Social impact assessment in subarctic Ontario.

Rouse, W.R. GEOGRAPHY/TASO

Technological assessment in subarctic Ontario.

Schwarcz, H.P. GEOGRAPHY

Uranium in groundwaters; RADWASTE disposal; karst systems.

Sheng, G. FACULTY OF ENGINEERING

Technology assessment of high-level nuclear waste disposal for NATO, including socio-economic, political, and environmental factors.

Shemilt, L.W.	FACULTY OF ENGINEERING Canadian Nuclear Fuel Waste Management Program, Technical Advisory Committee (advises on technical matters and reviews environmental assessment work underway).
Taylor, S.M.	GEOGRAPHY Environmental assessment of proposed Vancouver International Airport expansion.
Woo, M.K.	GEOGRAPHY/TASO Modelling the effects of uranium mining tailings upon the permafrost environment of Keewatin; hydrological impacts of developing northern Ontario (TASO).

PROGRAM ACTIVITIES:

A. *Technology Assessment in Subarctic Ontario (TASO)*

TASO is a multidisciplinary research program whose objective is to study potential environmental and social impacts of energy-resource development projects in subarctic Ontario. The principal investigators consist of professors from the departments of geography, economics, anthropology and biology. Students are involved as researchers, doing work towards master's and doctorate degrees in each of these disciplines. TASO maintains a research station in the Moosonee region. It also publishes research reports on its findings. The initial focus is on the potential impacts of a proposed hydroelectric development on the Moose River's drainage, and on the people who live in the region.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA:

1) Faculty of Engineering: Review of the Canadian Nuclear Fuel Waste Management Program (CNFWMP). The Canadian Nuclear Fuel Waste Management Program, coordinated by Atomic Energy of Canada Limited, is being reviewed on a continuing basis by an independent Technical Advisory Committee whose 13 members were nominated by major scientific/engineering societies in Canada. Besides offering advice on technical matters, it also reviews the environmental assessment work being done, which is a critical part of the program. TAC publishes an annual report which is available upon request.

2) SIA Workshop, at the annual congress of the Society for Applied Anthropology in Canada, Chair: P. Martin Brizinski (Department of Anthropology).

ACTIVITÉS

A. *Technology Assessment in Subarctic Ontario (TASO)*

TASO est un programme de recherche multidisciplinaire qui a pour but d'étudier les impacts environnementaux et sociaux, à l'étape de la conception des projets dans la partie presque arctique de l'Ontario. Les principaux investigateurs sont professeurs aux départements de géographie, d'économie, d'anthropologie et de biologie. Les étudiants y travaillent en tant que recherchistes, effectuant des travaux qui les conduiront à une maîtrise ou à un doctorat dans chacune de ces disciplines. TASO possède une station de recherche dans la région de Moosonee et publie des rapports de recherche relatifs à ses découvertes. On se concentre surtout sur les impacts possibles d'un projet de développement hydroélectrique sur le drainage de la rivière Moose, ainsi que sur les gens qui habitent la région.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales:

1) Faculté de génie — revue du programme canadien de gestion des déchets nucléaires. Le programme, coordonné par l'Énergie Atomique du Canada, est revu continuellement par un comité consultatif technique dont les 13 membres ont été nommés par des sociétés scientifiques et de génie importantes du Canada. En plus d'offrir des conseils sur les sujets techniques, une partie importante du programme consiste à revoir les travaux courants en évaluations environnementales. Le comité publie également un rapport annuel qui est disponible sur demande.

2) Atelier sur les évaluations des impacts sociaux, tenu lors du congrès annuel de la société d'anthropologie appliquée au Canada, présidé par P. Martin Brizinski du département d'anthropologie.

THE UNIVERSITY OF MANITOBA

Location/Endroit: Winnipeg, Manitoba

Mailing Address/ Adresse: The University of Manitoba
Winnipeg, Manitoba
R3T 2N2

TEACHING:

Department of Zoology

22.471 (2) WILDLIFE MANAGEMENT

Introduction to the biological and socio-economic goals of wildlife management and to the basic techniques of wildlife management in terms of these goals. There will be four or five weekend field trips. Instructor: R. Riewe.

22.741 (G) BIOLOGICAL RESOURCE MANAGEMENT

Instructor: R. Riewe.

Faculty of Law

45.360 (3) ENVIRONMENTAL LAW

The objective of this course is to familiarize students with various legal control mechanisms to deal with environmental issues and their adequacy: common law remedies, legislative and administrative regulation. During this review of legal mechanisms, students study various aspects of constitutional law, administrative law, conflict of laws, international law, and multi-disciplinary issues. Instructor: B. Bass.

Natural Resources Institute

56.708 (G) ENVIRONMENTAL IMPACT ASSESSMENT: PRINCIPLES AND APPLICATIONS

Instructor: W. Everett.

56.710 (G) RESEARCH METHODS

Instructor: T. Henley.

81.228 (G) ENVIRONMENTAL ECONOMICS

Instructor: J. Grey.

81.710 (G) SEMINAR IN ENVIRONMENTAL EDUCATION

Instructor: H. Williams.

Department of Civil Engineering

23.264/265 (2) TECHNOLOGY AND SOCIETY I & II

History of technology and its effect upon society. Causes of technology and economic growth. Current problems: environmental impact, water quality, waste treatment, stream pollution, eutrophication, solid wastes, air pollution and housing.

23.45 ( ) DESCRIPTION OF EIA CONCEPTS

Environmental impact, environmental inventories, environmental assessment, with weighted ranking technique, parameter importance units, environmental impacts units, economic impact assessment, non-economical factors, selection of alternatives. Instructor: J. Oleskiewicz.

23.720 (G) TOPICS IN ENVIRONMENTAL ENGINEERING (Energy and the Environment)

Includes topics such as energy and the environment, solid waste management, and environmental problems in transport. Topics are studied through case histories of contemporary issues. Instructor: A.M. Lansdown.

23.794 (G) TOPICS IN ENVIRONMENTAL ENGINEERING II (Movement of Hazardous Cargoes)

A discussion of the movement of hazardous cargoes by rail and road, including procedures followed, regulations enforced, trends in control in Canada, the cause and frequency of accidents, the manner of preventing accidents, the manner of reducing accident seriousness, current and future developments in equipment and procedures. Instructor: A.M. Lansdown.

Department of Geography

53.352 (3) ENERGY AND SOCIETY

Explanation of basic energy laws and flows in the biosphere precedes discussion of energy resources, technologies, uses and impacts. Instructor: V. Smil.

53.353 (3) INTRODUCTION TO LAND-RESOURCE MANAGEMENT

A study of the geographical aspects of problems and conflict arising land-resource utilities. Instructor: J. Romanowski.

INDIVIDUAL RESEARCH AND WORK:

Henley, T. NATURAL RESOURCES INSTITUTE

Environmental education; socio-economic impact.

Lansdown, A.M. CIVIL ENGINEERING

EIA and the transport of hazardous cargoes.

Roberts, L. SOCIOLOGY

Environmental and social impact assessment (in northern context); northern native employment; member, Environmental Assessment Panel, Shoal Lake Cottage Lot Development; advisor and contributor to Institute for Social and Economic Research.

Tamburi, A. CIVIL ENGINEERING

EIA as it relates to water resources; impact of river migration in Bangladesh; identification of groundwater pollution plumes; sediment dynamics along the Assiniboine River in Manitoba; underground disposal of mine tailings.

PROGRAM ACTIVITIES:

A. *Natural Resources Institute*

The Institute's objectives are: to teach resource management skills leading to the degree of Masters of Natural Resource Management; to conduct useful research in current problems of natural resource management; and to provide a forum for examination of resource issues and thus raise the level of public awareness.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA: None indicated.

ACTIVITÉS:

A. *Natural Resources Institute*

Les objectifs de l'Institut sont: l'enseignement des connaissances dans le domaine de la gestion des ressources menant à une maîtrise en gestion des ressources naturelles, mener une recherche utile dans le cadre des problèmes courants de gestion de ressources naturelles, et servir de forum pour l'examen des problèmes concernant les ressources et de ce fait eveiller l'intérêt du public.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

Location/Endroit: St. John's, Newfoundland

Mailing Address/
Adresse: Memorial University of Newfoundland
Elizabeth Avenue
St. John's, Newfoundland
A1C 5S7

TEACHING:

Department of Geography

GEO 3300 (3) ADVANCED CONSERVATION I

A study of environmental conservation with emphasis on air and water pollution.

GEO 3340 (3) TECHNIQUES CF URBAN AND REGIONAL ANALYSIS

Introduction to some of the more common types of analysis of urban and regional systems. The techniques chosen have utility in EIA/SIA.

Faculty of Engineering and Applied Science

ENG 5132 (4) ENVIRONMENTAL CONSERVATION AND MANAGEMENT

An analysis of local ecosystems, with emphasis on the description, measurement and management of the abiotic and biotic factors critical to conservation, sustained use and enjoyment of our natural resources and environment.

ENG 5141 (4) ECONOMIC AND SOCIAL IMPACT OF MAJOR PROJECTS

The course will include general methods of assessing the impact of major projects and the problems associated with the identification and valuation of costs and benefits. While the emphasis will be on the economic costs and benefits, social implications will be considered. A number of specific projects will be studied in greater detail.

ENG 6101 (5) ASSESSMENT OF TECHNOLOGY

Group seminars, each group evaluating the role of engineering technology in society, focusing on the sociological and environmental effects of major projects or developments in Newfoundland.

INDIVIDUAL RESEARCH AND WORK:

Bennett, G. BIOLOGY

Monitoring impact of Matacil on non-target insects; consultant to provincial and federal governments; monitoring of environmental impacts on bird communities and aquatic systems.

Christian, A.J. OCEAN ENGINEERING RESEARCH GROUP

Impact of offshore oil and gas on the Newfoundland construction industry.

Dempster, R.T. OCEAN ENGINEERING RESEARCH GROUP

Economic consequences of oil and gas development in Newfoundland.

Draper, D.L. GEOGRAPHY

Consultant to private and public sectors; assessment of potential project impacts; design of EIA/SIA studies; project evaluation.

Hartmann, G. POLITICAL SCIENCE

Social impact assessment of offshore oil development; baseline development for the Hibernia proposal; design of EIA programs.

House, D. SOCIOLOGY

Social and economic impact of offshore oil development in Scotland and Newfoundland.

Scarlett, M. GEOGRAPHY

Consultant to the private and public sectors; project impact evaluation; impact assessment; public information; design of EIA/SIA programs.

Steele, D.H. BIOLOGY

Predevelopment environmental studies; question of impact prediction.

Storey, K. GEOGRAPHY

Onshore Employment from Offshore Oil (a project funded by Petro-Canada); team member in a scoping study to identify research priorities in Maritime Canada for Canada Oil and Gas Lands Administration (COGLA): Environmental Studies Revolving Fund, Social Issues East.

White, R. GEOGRAPHY

Consultant to private sector on environmental assessment; economic impact of petroleum development.

PROGRAM ACTIVITIES:

A. 1) *Department of Geography*

A major focus of the teaching and research undertaken by the Department of Geography is conservation of resources. Environmental assessment is therefore examined as it relates to the efficiency of resource use. Associated with this, are land-use planning questions, with a particular interest of many department members being offshore development and its related impacts.

2) *Faculty of Engineering and Applied Science*

A study of the social, environmental and economic aspects of engineering serves as a basis for teaching and research in EIA/SIA. Particularly active is the Ocean Engineering Research Group with its focus on offshore development.

3) *Labrador Institute of Northern Studies*

The purpose of the Institute is to stimulate, co-ordinate and support major university projects or programs designed to promote the well-being and enhance our knowledge of Labrador. Recently, the Institute has been involved in studies relating to resource harvesting and settlement, sea-ice navigation and initial social and economic assessment of the Labrador coast.

4) *Extension Service*

The Extension Service is the unit within Memorial University which serves the community at large. Its function is to be a catalyst for positive change within Newfoundland's unique geographic and demographic realities. The Extension Service has developed adaptive educational methods and tools that can serve, for example, both the fishermen in remote areas needing information on fish quotas, and the graduate engineer in urban areas seeking continuing education on the latest technological advances in cold ocean engineering for sea-ice management.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA:

1) The Media Unit of the Extension Service prepared a videotape for the Federal Environmental Assessment Review Office (FEARO). The videotape uses clay animation to explain the subtleties of the federal Environmental Assessment and Review Process (EARP).

2) "Public Participation in Resource Development Assessment," Memorial University Extension Service, 1980.

3) *Planning for Northern Communities* Conference Report. A report of the proceedings of the conference on Planning for Northern Communities, held in Goose Bay, Labrador August 24-29, 1981, was prepared by the Extension Service for the Newfoundland and Labrador Branch of the Atlantic Planners Institute.

4) "Iceberg Management in Offshore Exploration, Production and Transportation," Continuing Engineering Education Centre, November, 1982.

5) Continuing Engineering Education Seminars:

"Management and Conservation of Energy", St. John's, 1984.

"Industrial Benefits from Offshore Oil Activity," St. John's, May 14-16, 1984.

"Iceberg management", St. John's, 1984.

"Introduction to Offshore Management", St. John's and Calgary, 1984.

"Safety Management for Offshore Management", Date and place to be announced.

6) Labrador Institute for Northern Studies organizes in Labrador workshops, conferences and seminars on topics associated with EIA.

ACTIVITÉS:

A. 1) *Department of Geography*

L'un des principaux sujets sur lesquels portent l'enseignement et la recherche dans ce département est la conservation des ressources. On y étudie donc l'évaluation environnementale du point de vue de l'efficacité de l'utilisation des ressources et les questions connexes de la planification de l'utilisation des terres. Plusieurs membres du département portent un intérêt particulier à la mise en valeur des ressources en mer et aux effets qui en découlent.

2) *Faculty of Engineering and Applied Science*

L'enseignement et la recherche dans le domaine de l'évaluation environnementale sont basés sur l'étude de l'aspect social, écologique et économique du génie. Le Groupe de recherche du génie de la mer, qui étudie surtout l'exploitation des ressources en mer, est particulièrement actif.

3) *Labrador Institute of Northern Studies*

L'institut est destiné à stimuler, coordonner et assister les projets universitaires importants organisés en vue de promouvoir le bien-être au Labrador et d'améliorer notre connaissance de cette région; récemment, l'institut a participé à des études concernant les établissements humains et l'exploitation des ressources, la navigation dans les glaces en mer, et l'évaluation initiale sociale et économique de la côte du Labrador.

4) *Extension Service*

Le département d'éducation permanente est la section qui, à l'université Memorial, dessert le grand public. La section agit comme catalyseur en vue des changements positifs des réalités géographiques et démographiques particulières uniques à Terre-Neuve. Le service d'extension a développé des méthodes et outils d'enseignement dont peuvent se servir, par exemple, aussi bien les pêcheurs des localités éloignées qui désireraient de l'information sur les quotas de poissons, que les ingénieurs diplômés des régions urbaines qui désireraient continuer l'étude des derniers progrès de la technologie de l'ingénierie des océans froids en vue de la gestion des glaces de mer.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales:

1) Le service de média du département d'éducation permanente a produit une bande magnétoscopique pour le Bureau fédéral d'examen des évaluations environnementales (BFEEE). On a utilisé des figurines pour expliquer les subtilités du processus fédéral et d'évaluation d'examen en matière d'environnement (PFEEE).

2) «Public Participation in Resource Development Assessment.» Service d'éducation permanente de l'université Memorial, 1980.

3) *Planning for Northern Communities*: Le département de l'éducation permanente de la section Terre-Neuve et Labrador de l'institut des planificateurs des communautés nordiques, qui a eu lieu à Goose Bay, Labrador, du 24 au 29 août 1981.

4) «Iceberg Management in Offshore Exploration, Production and Transportation». Centre d'éducation permanente en génie, novembre 1982.

5) Séminaires offerts par le centre d'éducation permanente en génie:

«Management and Conservation of Energy», St. John's, 1984.

«Industrial Benefits from Offshore Oil Activity,» St. John's, 14-16 mai 1984.

«Iceberg management», St. John's, 1984.

«Introduction to Offshore Management», St. John's et Calgary, 1984.

«Safety Management for Offshore Management», date et lieu à être annoncés.

6) L'institut des études nordiques du Labrador organise des ateliers, conférences et séminaires sur des sujets relatifs aux évaluations environnementales.

UNIVERSITÉ DE MONCTON

Location/Endroit: Moncton, Nouveau-Brunswick

Mailing Address/ Adresse: Université de Moncton
Moncton, Nouveau-Brunswick
E1A 3E9

COURS:

Programme de génie

G.G. 2520 TECHNOLOGIE DE L'ENVIRONNEMENT

Écologie, écosystèmes, cycles biogéochimiques. Analyse des systèmes environnementaux. Toxiques et toxicité. Environnement aquatique: polluants des eaux, eutrophisation, techniques de traitement. Environnement atmosphérique: polluants de l'air, précipitations acides, techniques de traitement. Disposition des déchets. Etudes d'impacts environnementaux. Professeur: R. Leduc.

RECHERCHE ET TRAVAUX PERSONNELS:

Aucuns mentionnés.

ACTIVITÉS:

A. Aucunes mentionnées.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnemen tales: Aucunes mentionnées.

PROGRAM ACTIVITIES:

A. None indicated.

B. EIA Core Program or Streaming? None indicated.

C. Activities Related to EIA: None indicated.

UNIVERSITÉ DE MONTRÉAL

Location/Endroit: Montréal, Québec

Mailing Address/
Adresse: Université de Montréal
C.P. 6128, Succursale A
Montréal, Québec
H3C 3J7

COURS:

Département de géographie

GEO 3003 GÉOGRAPHIE ET ENVIRONNEMENT

Dimension sociale, biophysique et politique de l'environnement. Mutations du paysage (érosion anthropique), affectations de l'environnement (grands projets d'aménagement): évaluation et analyse. Nature des études d'impact sur l'environnement. Coordonnateur: G. Boileau.

GEO 3573 GÉOGRAPHIE ET AMÉNAGEMENT DU TERRITOIRE

Brève histoire de l'idée d'intervention territoriale. Les grands principes, les concepts et les méthodes; l'évolution des politiques et des cadres de l'intervention au Québec. Analyse critique des outils; plans directeurs, schémas d'aménagement. L'application des plans et schémas: le processus de décision. Coordonnateur: G. Boileau.

Institut d'urbanisme

URB-2160 (2) PROTECTION ET GESTION PUBLIQUE DE L'ENVIRONNEMENT

Étude de quatre nouveaux domaines d'intervention publique étroitement liés à l'aménagement: la protection de l'environnement, les espaces naturels, les sites et arrondissements historiques et naturels, la protection du territoire agricole. Organisation administrative aux divers échelons gouvernementaux; mécanismes de protection et d'intervention; modalités effectives de mise en oeuvre. Examen comparatif et critique des modes adoptés et appliqués dans les quatre domaines d'études. Coordonnateur: M. Gariépy.

URB-6144 (G) ENVIRONNEMENT ET CADRE DE VIE

A partir de dossiers actuels ce laboratoire ouvre l'analyse à la fois vers le processus de planification écologique et vers les études du bien-être, du cadre et de la qualité de la vie comme un des paramètres de l'intervention et de la conception en aménagement. Coordonnateur: M. Gariépy

URB-6447 (G) URBANISATION ET ENVIRONNEMENT

L'émergence du paradigme environnemental. Ses résonnances épistémologiques, méthodologiques et sociales. Impact des pratiques d'urbanisme sur le champ des problèmes environnementaux: procédés d'intervention; responsabilité des acteurs; rôle des acteurs publics et privés, moyens de concertation. Nouvelles composantes du processus et du dossier d'urbanisme. Coordonnateur: B. Blanc.

URB-6348 (G) INDICATION ET ÉVALUATION ENVIRONNEMENTALE

Position de l'indication et de l'évaluation environnementale dans le processus de la planification et impact sur la décision. Problématiques et instruments de gestion des ressources, d'évaluation des potentiels et d'évaluation des impacts. Méthodologie des études d'impact. Orientation et méthode des indications de la qualité du cadre de vie. Coordonnateur: M. Gariépy.

URB-6349 (G) SÉMINAIRE SUR LA QUESTION ENVIRONNEMENTA ET LA PRATIQUE DE L'URBANISME

Les conditions nouvelles de la pratique de l'urbanisme à l'occasion de l'extension de la question environnementale: nouvelles connaissances, nouveaux paradigmes de l'action; dimensions sociales nouvelles des conditions d'équité et de justice; processus de planification écologique; champ de la politique environnementale et positionnement de l'urbanisme dans ce champ; méthodes et techniques d'intervention du nouvel urbanisme dans le contexte de la question environnementale. Coordonnateur: R. Parenteau.

Département de sociologie

SOL 3200 (3) SOCIOLOGIE DE L'ENVIRONNEMENT

Rapport homme-environnement. Aspects socio-économiques, politi-

ques et culturels. Origine et effets de la crise de l'environnement. Le mouvement écologique. Les études d'impact et l'évaluation environnementale. Coordonnateur: J.-G. Vaillancourt.

SOL 6730 3 (G) ANALYSE DES MICRO-SYSTÈMES SOCIAUX

Étudier l'équilibre d'un micro-système et sa relation à l'environnement: l'intervention possible de l'homme sur ce milieu. À partir des plans concrets d'une vallée, élaborer des modèles alternatifs de village. Coordonnatrice: C. Carisse.

Département de biologie

BIO 3892 (3) CALCUL D'IMPACTS, AMÉNAGEMENT AQUATIQUE

Technique d'évaluation d'impacts de projet sur l'environnement. Méthodes de Léopold, Batelle, Sorensen, Holmes, Odum, etc. Principaux types d'aménagement en milieux aquatiques: utilisation des berges, ensemencement, frayères, passes migratoires, etc. Visites sur le terrain. Coordonnatrice: B. Pinel-Alloul.

RECHERCHE ET TRAVAUX PERSONNELS:

Benoit, A. INSTITUT D'URBANISME

Étudiante à la maîtrise en urbanisme. Impact sur le camp urbain du processus d'enquête et d'audience publique sur l'environnement au Québec.

Blanc, B. INSTITUT D'URBANISME

Pratiques institutionnelles d'évaluation d'impact et de l'audience publique sur l'environnement.

Domon, G. INSTITUT D'URBANISME

L'inventaire, la classification et la cartographie écologiques, en tant qu'outils d'aménagement (Ph.D.)

Gariépy, M. INSTITUT D'URBANISME

Evaluations environnementales; spécialisé en planification environnementale; pratiques institutionnelles d'évaluation d'impact et de l'audience publique sur l'environnement.

Gauthier, M. INSTITUT D'URBANISME

Étudiante à la maîtrise en urbanisme. Le concept d'impact social, sa place dans les procédures et les méthodes d'évaluation; son émergence dans la procédure québécoise.

Kadima, K. INSTITUT D'URBANISME

Étudiant à la maîtrise en urbanisme. Travail dirigé: Les bidonvilles et les problèmes d'environnement. Le cas de Kinshasa.

Leduc, F. INSTITUT D'URBANISME

Étude d'impact social (Projet Archipel).

Parenteau, R. INSTITUT D'URBANISME

Spécialisé en sociologie de l'environnement; une subvention de recherche de l'OTAN (Comité des défis des sociétés modernes), pour étudier les rapports entre les politiques environnementales et les politiques d'aménagement; pratiques institutionnelles de l'évaluation d'impact et de l'audience publiques sur l'environnement.

Soubeyran, O. INSTITUT D'URBANISME

Pratiques institutionnelles de l'évolution d'impact et de l'audience publique sur l'environnement.

Trépanier, M.-O. INSTITUT D'URBANISME

Spécialisé en droit de l'environnement; pratiques institutionnelles de l'évaluation d'impact et de l'audience publique sur l'environnement.

Vaillancourt, J.-G. SOCIOLOGIE

La sociologie du mouvement écologique et son influence sur les perceptions québécoises.

ACTIVITÉS:

A. 1) *Département de géographie*

Le département vise à donner à ses étudiants une connaissance solide des bases de la science géographique (organisation de l'espace, analyse spatiale) et ainsi à former des géographes aptes à l'enseignement, au travail dans la fonction publique, l'entreprise privée ou la recherche fondamentale. Les programmes ont été entièrement refondus, permettant une meilleure adéquation de la formation proposée aux besoins actuels de la société.

2) *Institut d'urbanisme*

La recherche et l'enseignement dans le domaine des évaluations environnementales se font sous l'angle de l'aménagement et de la planification de l'environnement. On porte un intérêt particulier aux méthodes employées pour déterminer les incidences des projets d'exploitation.

3) *Département de sociologie*

Le programme offert se rapporte directement aux incidences sociales des grands projets d'exploitation. L'étude de la sociologie de l'environnement revêt une importance particulière.

4) *Centre de recherche écologique de Montréal (CREM)*

Le CREM entreprend des études qui portent sur les composants biologiques et physiques des milieux terrestres, et des eaux douces et salées. Il s'efforce également d'identifier les éléments écologiques d'une utilisation rationelle des ressources qui tienne compte à la fois de la protection et de la conservation de l'environnement.

B. Programme spécifique aux évaluations environnementales?

Non. Cependant, comme d'autres, cette institution possède les ressources et la compétence nécessaires pour permettre d'étudier ce domaine.

C. Activités se rapportant aux évaluations environnementales: Aucunes mentionnées.

PROGRAM ACTIVITIES:

A. 1) *Département de géographie*

The Department tries to give its students a sound basic knowledge of geography (organization of space), and to train geographers who can work in education, the public service, private industry or basic research. The programs have been completely redesigned, making the proposed training more apt to meet society's current needs, including the field of EIA.

2) *Institut d'urbanisme*

The research and teaching of EIA topics are approached as they relate to the management and planning of the environment. The methodologies used in determining the impact of development projects are a particular focus.

3) *Département de sociologie*

The program that is offered directly relates to the social impacts caused by major development projects. Of particular note is the study of the sociology of the environment.

4) *Centre de recherches écologiques de Montréal (CREM)*

The Centre de recherches écologiques de Montréal (CREM) specializes in doing studies in the biophysical sciences for terrestrial, and fresh or salt-water environments. It also does research related to ecology as it could pertain to rational resource use and environmental conservation.

B. EIA Core Program or Streaming?:

No, however, as in other institutions the facilities and expertise are available to allow one to pursue study in this area.

C. Activities Related to EIA: None indicated.

UNIVERSITY OF NEW BRUNSWICK

Location/Endroit: Fredericton, New Brunswick

Mailing Address/
Adresse: P.O. Box 4400
Fredericton, New Brunswick
E3B 5A3

TEACHING:

Faculty of Forestry

FOR 5912 (2B) (5) ENVIRONMENTAL IMPACT ASSESSMENT

This course serves as an introduction to environmental assessment for senior forestry undergraduates in the forest environment emphasis. Roughly equal attention is given to procedural matters, conceptual approaches and quantitative tools in the lecture portion of the course. Weekly seminars deal with other important topics such as public participation, environmental bargaining, EIA law, social impact assessment, and group problem solving. Major assignments deal with hypothetical development scenarios. Instructors: P.A. Arp, P.N. Duinker, R. Ricard.

Department of Civil Engineering

CE3401 (3) INTRODUCTION TO ENVIRONMENTAL ENGINEERING

To introduce the problems and principles of control modification of the environment using resources and safeguarding of environmental systems. An environmental dimension will be added to all planning, design and analysis functions carried out by engineers.

CE5402 (4) ENVIRONMENTAL PLANNING FOR CAPITAL WORKS

The objectives of the course are to assist planners and engineers in making environmentally sound decisions on land use and to guide practitioners in facility siting. Specific topics covered include an introduction to environmental planning, land capability and suitability analysis, environmental administration and legislation in Canada, land planning for capital projects, environmental impact analysis, environmental modelling, socio-economic planning and impact analysis, and decision-making for siting facilities. Instructor: G.B. Ward.

CE5432 (4) SITE PLANNING

To better appreciate the comprehensive nature of site analysis and the physical, social and environmental impacts of engineering works on a site and its surroundings. To incorporate site characteristics which enhance project costs, appearance and energy efficiency.

Faculty of Law

LAW 3450 (3) LAW AND THE NATURAL ENVIRONMENT

The primary aim of the course is to establish an analytical framework for evaluating environmental issues — first, through a consideration of the characteristics of environmental problems (causes and effects); second, through an evaluation of the peculiar difficulties these problems pose for the traditional legal system; and finally, by an examination of the various responses that legal, economic and administrative institutions have or might make to environmental issues. The concept and practice of EIA (both federally and provincially) as a tool for preventing environmental deterioration is examined in detail. Instructor: H.N. Versteeg.

INDIVIDUAL RESEARCH AND WORK:

Duinker, P.N — FACULTY OF FORESTRY

Report on ecological basis of EIA; annotated bibliography on ecology and EIA; several papers on EIA procedures, offshore EIA, scientific basis of EIA, impact prediction, monitoring of effects, and impact significance; current Ph.D. research entails the development of a conceptual framework for impact forecasting in EIA, using as a case study the use of herbicides in silviculture.

Lin, K.C. — CIVIL ENGINEERING

Environmental impact studies on the Saint John River basin.

Versteeg, H.N — FACULTY OF LAW

Theory of EIA.

Ward, G.B. — CIVIL ENGINEERING

EIA of sanitary landfills; hazardous waste management.

PROGRAM ACTIVITIES:

A. None indicated.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA: None indicated.

ACTIVITÉS:

A. Aucunes.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

NOVA SCOTIA COLLEGE OF ART AND DESIGN

Location/Endroit: Halifax, Nova Scotia

Mailing Address/ Adresse: Nova Scotia College of Art and Design
5163 Duke Street
Halifax, Nova Scotia
B3J 3J6

TEACHING:

Department of Environmental Planning

SOCIAL PLANNING — INTERMEDIATE

One section of the course deals exclusively with EIA. Instructor: J. Grant.

ENVIRONMENTAL PLANNING III — STUDIO — INTERMEDIATE

Community Planning Methods: specific projects which may involve SIA or elements of it (e.g. the 1982 project involved impact assessment of the proposed Venture gas development and its effects on the labor force of the eastern shore region of Nova Scotia). Instructor: J. Grant.

LAND USE PLANNING — ADVANCED

One section of the course deals with EIA methodology using a survey format and case studies. Emphasis is on the regional and site-specific scale and relates principally to EIA of proposed development projects. Instructor: G.R. Parker.

ENVIRONMENTAL ISSUES — INTERMEDIATE

The course will examine a number of land use, conservation and resource development problems encountered in Nova Scotia through a series of case studies and field trips. These will include an analysis of such topics as acid rain, the pollution of lakes, tidal power, oil and gas pipelines, national parks, fisheries and other natural resource development. Each case study will be examined in terms of natural or scientific processes as well as the philosophical or ethical assumptions of traditional environmentalists. The course compares Canadian impact assessment techniques with those of the U.S. and Great Britian. Focus includes large scale resource development projects e.g. petro-chemicals, housing developments, and energy projects.

ENVIRONMENTAL PLANNING — METHODS — INTERMEDIATE

The course examines various impact assessment techniques for assessing the ecological suitability of the terrestrial environment for a variety of uses. The works of McHarg, Hill, Lewis, Steinitz, Dorney and others are discussed, compared and evaluated. This course emphasizes methods of synthesis rather than analysis. Field survey techniques for environmental quality measurement are also presented.

ENVIRONMENTAL PLANNING I — RESOURCE ANALYSIS AND MANAGEMENT — INTERMEDIATE

Natural resource analysis techniques are introduced. Biophysical investigations are undertaken on a variety of landforms in selected regions of Nova Scotia. The course basically reviews assessment techniques used to investigate the suitability of various environments for a variety of uses. Investigations include: bedrock geology, surficial geology, physiography, soils, climate, hydrology, vegetation, wildlife, visual resources, and land use. The course utilizes air photo interpretation lectures, field trips and a major studio project to apply suitability techniques.

ADVANCED STUDIO PROJECTS — ADVANCED

Selected projects on a site-specific basis incorporate elements of environmental and social impact assessment work through land analysis and capability assessment, demographic analysis and social impact assessment, and management guidelines for mitigating undesirable impacts.

INDIVIDUAL RESEARCH AND WORK:

Grant, J. — ENVIRONMENTAL PLANNING

Social feasibility studies of development projects in West New Britain, Papua New Guinea.

Parker, G.R.

ENVIRONMENTAL ASSESSMENT

Venture EIS Aesthetic Environment, Mobil Oil Canada, 1982: considerations for site selection, design and development of onshore facilities including: landfall site, pipeline corridor, and gas plant installation; landscape characteristics and visual design opportunities.

PROGRAM ACTIVITIES:

A. *Environmental Planning Department*

The Department offers courses and promotes research on EIA from the planning perspective.

B. EIA Core Program or Streaming?: Not as a separate stream.

C. Activities Related to EIA: Site-specific project and contract work with municipal and provincial government agencies. Also contract work with Parks Canada dealing with EIA.

ACTIVITÉS:

A. *Environmental Planning Department*

Le département offre des cours et encourage la recherche sur l'évaluation environnementale du point de vue de la planification.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales:

Projet à emplacement précis et travaux contractuels avec les autorités provinciales et municipales. Egalement, travaux contractuels avec Parcs Canada concernant l'évaluation environnementale.

UNIVERSITY OF OTTAWA/UNIVERSITE D'OTTAWA

Location/Endroit: Ottawa, Ontario

Mailing Address/ Adresse: University of Ottawa/ Université d'Ottawa
Ottawa, Ontario
K1N 6N5

TEACHING/COURS:

Civil Engineering/génie civil

CVG 2130 (2) INTRODUCTION TO ENVIRONMENTAL ENGINEERING

Environmental resources and their role with emphasis on water pollution control and effects on ecology systems. Instructors: R.L. Droste, E.J. Schiller.

CVG 5132 (G) WASTE DISPOSAL ON LAND

Operation, site selection and environmental impact studies of land fills.

CVG 5139 (G) ENVIRONMENTAL ASSESSMENT OF CIVIL ENGINEERING PROJECTS

Environmental assessment review: methodology and Canadian case studies. Instructor: P. Wisner.

Geography/géographie

GEG 1200 (1) MAN AND HIS ENVIRONMENT

The interdependence of man and environment in the world ecosystem. Man's impact on the environment: destruction or conservation. Instructors: P.G. Johnson, R. Wesche.

GEG 1600 (1) L'HOMME ET SON MILIEU

Les liens d'interdépendence entre l'homme et son environnement. L'influence de l'homme sur le milieu physique, conservation et destruction. Coordonnateurs: D. Lagarec, M. Phipps.

GEG 3108 (3) REGIONAL AND URBAN SYSTEMS

The course focuses on theories and processes of urban and regional development emphasizing spatial evolution, structure and operation and reviewing the attempts by various countries at system regulation and intervention. Instructor: D. Tate.

GEG 3302 (3) RESOURCE MANAGEMENT: AN ECONOMIC APPROACH

The concept of scarcity applied to resource management. Various resources, but particularly water resources, are considered. Common property, public goods, market failure and political decision-making are analysed. Examination of specific cases under conflict and competition situations. Instructor: R. Needham.

GEG 3713 (3) ATELIER DE GEOGRAPHIE APPLIQUEE

Problématiques de l'application de concepts et méthodes géographiques dans le cadre de projets concrets d'aménagements urbains ou ruraux. Coordonnateurs: A. Langlois, E. Kayser, V. Berdoulay.

GEG 4119 (4) COASTAL DEVELOPMENT: MANAGEMENT CONSIDERATIONS

A multi-disciplinary approach to the analysis of Canadian shore and coastal development and regulation. Economic and political aspects of coastal management are studied. The environmental impact of change in this zone is considered. Instructor: R. Needham.

GEG 4319 (4) SEMINAR ON CANADA'S ENERGY FUTURE

Problems associated with adapting to the new situations of energy production consumption and distribution. Traditional sources of energy are analyzed as are newer forms and the technological advance associated with them. The environmental impact of alternative energy forms and systems is considered. Instructor: R. Needham.

GEG 5001 (G) SEMINAR: EARTH SCIENCES/ SÉMINAIRE: SCIENCES DE LA TERRE

Instructor/Coordonnateur: Staff/ Personnel

GEG 5003 (G) SEMINAR: RESOURCES MANAGEMENT/ SÉMINAIRE: GESTION DES RESSOURCES

Instructor/Coordonnateur: Staff/ Personnel

Biology/biologie

BIO 4101/
BIO 4501

PESTICIDES AND THE ENVIRONMENT/LES PESTICIDES ET L'ENVIRONNEMENT

Instructor/Coordonnateur: B.J.R. Philogène

INDIVIDUAL RESEARCH AND WORK/RECHERCHE ET TRAVAUX PERSONNELS:

Alvo, M. — MATHEMATICS/MATHÉMATIQUES

Mathematical methods for trend analysis; mathematical modelling for the assessment of environmental changes; development of sampling schemes for baseline data collection.

French, H. — GEOGRAPHY/GÉOGRAPHIE

Environmental assessment and development in northern regions.

Gagnon, H. — GEOGRAPHY/GÉOGRAPHIE

Utilisation et aménagement des sols; contrôle aérien de l'environnement.

Good, D.R. — FACULTY OF LAW/FACULTÉ DE DROIT

(see entry — Carleton University)

Logan, B. — PHYSICS/PHYSIQUE

Assessment of nuclear radiation hazards.

Needham, R. — GEOGRAPHY/GÉOGRAPHIE

Research into EIA, including media coverage and public participation.

Philogène, B. — BIOLOGY/BIOLOGIE

Environmental impact assessment of pesticides; consultant on pesticides to CIDA.

Wisner, P. — CIVIL ENGINEERING/GENIE CIVIL

Environmental impact of energy projects; environmental studies for the nuclear generating station at Point Lepreau, New Brunswick, and the Wreck Cove hydroelectric development in Nova Scotia.

PROGRAM ACTIVITIES:

A. 1) *Department of Civil Engineering*

Environmental assessment is studied in the Department's environmental engineering program. Topics related to water resources development and water quality preservation are major focal points in the program.

2) *Department of Geography*

Programs in graduate and undergraduate teaching and research address various aspects of EIA. The department has particular strength in northern studies and resources planning.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA. None indicated.

ACTIVITÉS:

A. 1) *Génie civil*

L'évaluation environnementale est étudiée dans le cadre du programme de génie de l'environnement du département. Ces travaux portent en particulier sur l'exploitation des ressources en eau et la conservation de la qualité de l'eau.

2) *Géographie*

Les programmes pour les étudiants diplômés et non diplômés, dans le domaine de l'enseignement et de la recherche, portent sur divers aspects de l'évaluation environnementale. Le département est particulièrement qualifié en études nordiques et en planification des ressources.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales. Aucunes.

UNIVERSITÉ DU QUÉBEC À CHICOUTIMI

Location/Endroit: Chicoutimi (Québec)

Mailing Address/
Adresse: Université du Québec à Chicoutimi
555, boul. de l'Université
Chicoutimi (Québec)
G7H 2B1

COURS:

Département des Sciences humaines

4 GEO 515 ( ) ÉVALUATION DES RESSOURCES NATURELLES

Le concept de «ressource naturelle» et sa place dans la géographie moderne. Les techniques d'analyse et d'évaluation intégrées des ressources naturelles: le «capital naturel.» L'utilisation des ressources naturelles, leur dégradation, et les politiques de conservation et de renouvellement. Études d'impact reliées à l'exploitation des ressources naturelles.

4 DRO 100 ( ) BASES D'UNE LÉGISLATION ET D'UNE GESTION DE L'ENVIRONNEMENT

L'objet de ce cours est de préciser comment la loi humaine doit refléter les lois biologiques fondamentales. Aperçu de la législation environnementale actuelle. Études de deux exemples: le bill 34 au Québec et l'évolution de la législation mésologique aux États-Unis.

Département des Sciences fondamentales

IMPA 813 (G) ÉTUDES D'IMPACT

Donner à l'étudiant les connaissances pratiques des techniques et méthodes de ceuillette d'analyse, de classification, d'interprétation et de représentation des données. Permettre à l'étudiant d'identifier les éléments critiques du milieu les plus susceptibles d'être affectés par une action naturelle ou artificielle, évaluer la nature et l'intensité de l'impact et proposer les formules de correction. Amener l'étudiant à développer les méthodologies et les techniques.

Identification sur le terrain et opérations. Les éléments biophysiques. Les divers instruments et techniques. Collection. Analyse et interprétation. Représentation cartographique, photographique, etc. Étude d'impact. Choix des éléments. Productivité et impact. Problèmes pratiques d'étude d'impact, techniques d'intervention. Utilisation de l'informatique.

RECHERCHE ET TRAVAUX PERSONNELS:

Désy, J. GÉOGRAPHIE

Enquête sur les lieux des études en développement et aménagement au Québec.

Gauthier, M.-J. GÉOGRAPHIE

Inventaire des ressources et du potentiel biophysique des monts Valin.

Klein, J.-L. GÉOGRAPHIE

Enquête sur les lieux des études en développement et aménagement au Québec.

ACTIVITÉS:

A. 1) *Certificat de premier cycle en sciences de l'environnement*

Ce programme en sciences environnementales a pour but d'initier les étudiants soit à la méthodologie, soit aux problèmes actuels.

2) *Centre de recherche du Moyen Nord*

Le Centre a comme objectif la mise en valeur des ressources non-renouvelables, renouvelables et humaines du Moyen Nord québécois. Ses quatre grands groupes de recherche sont: la mise en valeur des ressources minérales dans le Bouclier canadien; les études des problèmes reliés au froid; la productivité aquatique du Lac St-Jean, du Saguenay et de la Basse Côte-Nord; et les aspects socio-économiques et culturels du développement médio-nordique. Le service de documentation se spécialise dans l'acquisition d'informations non-publiées relatives au moyen Nord québécois.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

PROGRAM ACTIVITIES:

A. 1) *Certificat de premier cycle en sciences de l'environnement*

The objective of this program is to introduce students to the environmental sciences, their methodologies and some concrete problems which pertain to the environment and its study.

2) *Centre de recherche du Moyen Nord*

The purpose of the Centre is to encourage the development of the renewable, non-renewable, and human resources of Quebec's Middle North. Its four chief areas of activity are: the production of mineral resources in the Canadian Shield; the study of cold-related problems; the aquatic productivity of Lac St-Jean, the Saguenay River, and the lower north shore of the St. Lawrence River; and socio-economic and cultural aspects of the development of the Middle North. The documentation service collects unpublished information related to Quebec's Middle North.

B. EIA Core Program or Streaming? None indicated.

C. Activities related to EIA: None indicated.

UNIVERSITÉ DU QUÉBEC À MONTRÉAL

Location/Endroit: Montréal, Québec

Mailing Address/
Adresse: Université du Québec à Montréal
Case postale 8888
Montréal, Québec
H3C 3P8

COURS:

Département d'études urbaines

URB 4013 (4) ÉVALUATION DE PROJETS ET ÉTUDES D'IMPACT

Cours axé sur l'application de diverses techniques dans le cadre d'études d'impact et d'évaluations de projets. Accent mis sur l'utilisation des modèles urbains dans un tel cadre. Problème de l'intégration des variables qualitatives à l'analyse: les indicateurs sociaux. Déficiences de l'analyse coûts-bénéfices face à la dimension écologique de problèmes urbains. La prévision et l'évaluation dans le processus de prise de décision.

URB 4017 (4) MÉTHODES D'ÉVALUATION ET DE PRÉVISION EN URBANISME

Cours ayant pour but l'apprentissage de diverses techniques d'appréciation des projets en milieux urbain, et régional. Accent mis sur l'analyse avantage-coûts comme méthode d'évaluation unidimensionnelle. Initiation à des méthodes d'évaluation multi-critères, multi-objectifs, intégration des variables qualitatives et des indicateurs sociaux à l'analyse. Étude critique de la contribution des différentes approches méthodologiques. Le traitement de risque et d'incertitude dans l'évaluation des projets. Simulations, prévision et évaluation dans le processus de décision. Méthodes empiriques de prévision: les indices, la moyenne mobile simple et double, le lissage exponentiel, etc.

Modèles prospectifs: les concepts-clés de la prospective et les méthodes de base: scénarios, approches psychosociologiques, indicateurs sociaux, etc.

URB 4027 (4) ÉTUDES D'IMPACT ENVIRONNEMENTAL

Cours axé sur l'application de diverses techniques d'évaluation dans le cadre d'études d'impact des projets sur l'environnement urbain. Accent mis sur l'innovation en matière de conservation de l'énergie et sur la recherche de nouvelles formes de développement. Coordonnateur: C. Veitman.

URB 5013 (4) ÉCOSYSTÈMES ET ÉQUIPEMENTS COLLECTIFS

Cours prenant la forme d'un séminaire et visant à préciser les implications écologiques de l'implantation d'équipements collectifs dans un environnement naturel et/ou bâti donné. Séminaire spécialisé en écologie urbaine. Incidences des écosystèmes sur la planification des équipements collectifs. Modification des écosystèmes suite à l'implantation de certains équipements et au développement urbain. Études des phénomènes de dégradation du milieu.

Département de biologie

BIO 6800 (G) AMÉNAGEMENT

Étude des aménagements rendus nécessaires par les activités de la société technologique. Définition de l'aménagement et de la conservation. Les activités humaines et leur impact sur l'environnement. Aménagements possibles pour minimiser les impacts négatifs de ces activités sur l'environnement. Techniques d'aménagement et de protection de l'environnement dispensées sous forme de conférences par des spécialistes.

BIO 7399 (G) GESTION DE L'ENVIRONNEMENT

Applications des principes fondamentaux de la gestion des organisations au domaine de l'environnement. Les principes généraux sont étudiés sous une forme systémique comprenant: le système d'orientation avec l'importance du système de valeurs sur la mission et les objectifs; le système d'acquisition et de mobilisation des ressources humaines, physiques et financières (c'est-à-dire les intrants); le traitement ou la transformation des ressources qui comprend le système psycho-social, le système gestionnaire et le système technique; le système de performance avec l'évaluation des résultats (extrants).

Ce cours confronte en outre les problèmes de l'environnement à ceux de l'administration publique et des affaires.

Département d'économie

ECO 1470 ( ) ÉCOLOGIE, ÉCONOMIE ET ENVIRONNEMENT

Étude de la problématique environnementale telle que proposée par les économistes et les écologistes. Évaluation monétaire et non monétaire de l'environnement. Concept d'état stationnaire et notions d'écodéveloppement. Sociétés écologiques: de l'économie politique à l'écologie politique.

ECO 3470 ( ) ÉCONOMIE DE L'ENVIRONNEMENT

Étude des relations entre l'écologie, l'entreprise et l'économique. Éléments d'écologie. Pollutions et nuisances. L'économie positive de l'environnement. L'état stationnaire. Concepts d'écodéveloppement. Crise écologique et systèmes économiques.

Le programme de maîtrise en sciences de l'environnement

ENV 8020 (G) PROBLÈMES ENVIRONNEMENTAUX

Le premier volet comporte l'examen des lois et règlements des niveaux d'autorité et des modes d'intervention juridique relatifs à l'environnement. Dans un deuxième temps, sous la direction d'experts praticiens, on procède à l'analyse de méthodes d'évaluation d'impacts, de cas types d'inventaire, de restauration et d'aménagements de territoires en fonction de leur environnement.

RECHERCHE ET TRAVAUX PERSONNELS:

Berraja, M. GÉOGRAPHIE

Impacts des sites miniers sur la qualité de l'eau.

Dansereau, P. PROFESSEUR ÉMERITE

Écosystèmes et l'écologie urbaine.

Desbois, B. GÉOGRAPHIE

Évaluation des impacts des installations humaines sur l'environnement nordique (Maîtrise de géographie).

Di Pizzo, P. GÉOGRAPHIE

Le réseau d'assainissement et l'environnement nordiques. Le cas de ville Radisson (Maîtrise de géographie).

Groulx, F. GÉOGRAPHIE

Impacts des sites miniers sur l'environnement (Maîtrise de géographie).

Hamel, C. SCIENCES BIOLOGIQUES

Études préliminaires d'impacts sur l'environnement biophysique; aménagement du lac des Deux-Montagnes, de la rivière des Mille Iles et de la rivière des Prairies.

Joyal, R. SCIENCES BIOLOGIQUES

Effets des corridors hydro-électriques.

Robert, Y. GÉOGRAPHIE

Impacts des sites miniers sur la qualité de l'eau (Maîtrise de géographie).

Tellier, L-N. ÉTUDES URBAINES

Président du comité de consultation, étude de faisabilité, Archipel, projet d'aménagement des eaux de l'archipel de Montréal, Secrétariat d'État à l'aménagement.

ACTIVITÉS:

A. 1) *Centre de recherche en sciences de l'environnement (CERSE)*

Le Centre de recherche en sciences de l'environnement (CERSE) a pour but de développer la recherche environnementale. L'ensemble des projets du CERSE s'articule autour de deux axes fondamentaux: 1) l'étude de l'impact de la pollution sur les écosystèmes en vue de l'établissement des modèles et des mécanismes de fonctionnement des écosystèmes atteints de pollution; et 2) l'étude de l'ensemble des facteurs de l'environnement (physiques, sociaux et économiques) régissant une région géographique.

2) *Maîtrise en sciences de l'environnement*

Le programme de maîtrise en sciences de l'environnement s'adresse aux étudiants issus de diverses disciplines scientifiques. Ainsi, l'enseignement, la recherche, l'encadrement et la gestion sont assurés par des membres des départements de chimie, de géographie, de physique, des sciences biologiques et des sciences de la terre et par ceux du CERSE. Certains éléments du programme forcent l'étudiant à

s'intégrer à une équipe multidisciplinaire alors que d'autres s'adressent aux spécialistes disciplinaires.

3) *Certificat de premier cycle en sciences de l'environnement*

Le programme vise à donner un enseignement relié plus particulièrement aux aspects relevant des sciences physiques. Il offre aux étudiants la possibilité d'acquérir des connaissances variées leur permettant d'établir des relations entre les diverses disciplines pertinentes dans la résolution d'un problème environnemental.

4) *Certificat de premier cycle en écologie*

Le programme vise à fournir une formation de base dans le domaine de l'écologie: par l'acquisition des notions de biologie nécessaires à la compréhension de l'équilibre des écosystèmes et par l'apprentissage des principales techniques utilisées en écologie terrestre et aquatique. Le programme s'adresse à ceux qui, déjà engagés sur le marché du travail, désirent acquérir des connaissances en écologie, et à ceux qui veulent jouer un rôle dans l'utilisation rationnelle et la conservation des ressources renouvelables.

B. Programme spécifique aux évaluations environnementales?

Aucun programme particulier en matière d'évaluation environnementales n'existe, mais compte tenu de la flexibilité des programmes, l'étudiant peut pratiquement se constituer une concentration «à la carte» en matière d'évaluation des incidences environnementales et sociales.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

PROGRAM ACTIVITIES:

A. 1) *Centre de recherche en science de l'environnement (CERSE)*

The goal of the Centre de recherche en science de l'environnement (CERSE) is to carry out research in environmental studies, particularly in the biophysical sciences. The general fields in which the CERSE is involved are: 1) the study of pollution's impact on ecosystems and the functioning of ecosystems that have been affected by pollution; and 2) the integrated study of a geographic region's environmental features (physical, social and economic) to assess how its physical potential would affect its socio-economic development.

2) *Maîtrise en science de l'environnement*

The aim of this M.Sc. program is the education of professionals with practical skills in environmental and resource management. Its teaching staff, researching facilities and priorities and administration come from the departments of chemistry, geography, physics, the biological and earth sciences, as well as from the CERSE.

3) *Certificat de premier cycle en sciences de l'environnement*

The objective of this program is to offer students the opportunity to acquire a varied understanding of the physical sciences and their interrelations, and their application in dealing with problems which pertain to the environment.

4) *Certificat de premier cycle en écologie*

The purpose of this program is to offer students a basic understanding of ecology. They acquire the basic concepts in biology needed to appreciate the interrelationships within the ecosystem, as well as the main techniques used in terrestrial and aquatic ecology. The program is both for those already working in the field and those who wish to become involved in the rational use and conservation of renewable resources.

B. EIA Core Program or Streaming?

There is no specific program in EIA, but because of the flexibility inherent in certain programs, a student may develop for himself a concentration in EIA by selecting the appropriate courses.

C. Activities related to EIA: None indicated.

UNIVERSITÉ DU QUÉBEC À RIMOUSKI

Location/Endroit: Rimouski (Québec)

Mailing address/
Adresse: Campus de l'Université de Rimouski
300, avenue des Ursulines
Rimouski (Québec)
G5L 3A1

COURS:

Module de sociologie

SOC 206-82 (2) ÉCOLOGIE ET SOCIÉTÉ

Sensibiliser aux aspects sociaux du phénomène écologique et approfondir l'analyse sociologique des mouvements sociaux pour la protection de l'environnement. La sociologie de l'environnement en élaboration. Déterminants sociaux de la crise écologique et des solutions sociales qui y sont apportées. La question de l'environnement face au processus de changement socio-politique. Les mouvements sociaux environnementalistes; analyse des idéologies et des pratiques de quelques cas: écologie politique, luttes anti-nucléaires, agriculture biologique. Dynamique de développement du mouvement écologique québécois.

Maîtrise en développement régional

DEV 713-81 (G) ÉCONOMIE DES RESSOURCES NATURELLES

Le modèle économique pour l'exploitation des ressources naturelles. Ressources renouvelables. Ressources non-renouvelables. Approche statique et approche dynamique. Outils économiques pour une intervention publique. Rôle et importance des ressources naturelles dans le développement économique. Problèmes des régions-ressources.

DEV 721-81 (G) LE CADRE NATUREL DE L'AMÉNAGEMENT DU TERRITOIRE

Composition, structure et dynamique des écosystèmes. Le cheminement des ressources dans les écosystèmes. La notion d'équilibre morpho-climatique. L'évolution du climat et des milieux bio-géographiques. Les ruptures d'équilibre anthropiques: morpho-genèse anthropique, modification des communautés végétales et animales et des habitats. La qualité de l'environnement et l'aménagement des ressources. L'environnementalisme, la conservation de la nature et la transformation des écosystèmes. Définition des politiques régionale, nationale et mondiale d'utilisation et de conservation des ressources.

RECHERCHE ET TRAVAUX PERSONNELS

Jean, B. SOCIOLOGIE

L'écodéveloppement et l'identification d'une stratégie de développement régional adapté à la situation des régions périphériques québécoises, comme l'Est du Québec.

ACTIVITÉS:

A. 1) *Maîtrise en développement régional*

Le programme de maîtrise en développement régional est à caractère multidisciplinaire et s'adresse particulièrement aux détenteurs d'un diplôme de premier cycle en économie, géographie, histoire et sociologie. Les notions de dépendance, de marginalité, de disparités, des modèles de participation et d'implication populaire et des formules originales de développement, comme par exemple celles mises en oeuvre par des organismes de développement communautaire, peuvent être analysées en référence à des réalités concrètes dans un environnement socio-géographique où sont insérés professeurs et étudiants.

2) *Département d'océanographie*

Le département offre un programme de deuxième (M.Sc.) et de troisième cycle (Ph.D.) en océanographie dont les projets de recherches découlent des programmes de recherches du département d'Océanographie et de l'INRS-Océanologie.

B. Programme spécifique aux évaluations environnmentales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

PROGRAM ACTIVITIES:

A. 1) *Maîtrise en développement régional*

This multidiciplinary program in regional development is designed chiefly for graduates holding a degree in the social sciences, such as economics, geography, history or sociology. Various concepts such as regional dependence, marginality, disparity, as well as models of public involvement and community self-help programs are analyzed with reference to the reality of eastern Quebec.

2) *Département d'océanographie*

The Department offers a masters (M.Sc.) and a doctoral program in oceanography. Study projects are derived from the research programs of the Département d'océanographie and the INRS-Océanologie.

B. EIA Core Program or Streaming? None.

C. Activities Related to EIA: None indicated.

UNIVERSITÉ DU QUÉBEC À TROIS-RIVIÈRES

Location/Endroit: Trois-Rivières, Québec

Mailing Address/
Adresse: Université du Québec
à Trois-Rivières
Case postale 500
Trois-Rivières, Québec
G9A 5H7

COURS:

Département de chimie-biologie

ECL 1008 ( ) MÉTHODOLOGIE EN ENVIRONNEMENT

Présenter à l'étudiant les différentes problématiques rencontrées dans des études environnementales et étudier à l'aide de méthodologies appropriées ainsi que de techniques pertinentes, les éléments de solution.

DRT 1006 ( ) ASPECTS LÉGISLATIFS DE L'ENVIRONNEMENT

Ce cours se veut une introduction à l'aspect législatif de la gestion de l'environnement. Il veut faire ressortir: la différence entre les lois scientifiques et les lois d'un état ou d'un territoire; les prises de décisions basées sur une norme versus celles qui sont prises arbitrairement et; les solutions rationnelles et mathématiques versus celles qui sont centrées sur l'éthique. la culture, le mode de vie, l'économie et les facteurs humains.

DRT 6001 (G) DOCTRINE ET JURISPRUDENCE ENVIRONNEMENTALE

L'objectif du cours est de fournir à l'étudiant une connaissance de la gestion et de l'utilisation des ressources dans leurs aspects juridiques et de leurs influences sur l'environnement. Les aspects doctrinaux suivants sont abordés: la jurisprudence, la doctrine, les institutions, le rôle du scientifique en droit, les cadres juridiques canadien et québécois. Sources du droit, cadre constitutionnel; la rédaction et l'interprétation des lois. Navigabilité et flottabilité des cours d'eau; zonage, études d'impact: protection de l'environnement. Étude de textes de lois et de jurisprudence.

ECL 6004 (G) ÉTUDE D'IMPACT: ANALYSE ET MÉTHODOLOGIE

Ce cours passe en revue les différentes méthodes utilisées pour exécuter les études d'impact sur l'environnement. Chaque méthode fait l'objet d'une analyse et d'une critique pour en faire ressortir les avantages et les inconvénients. Une synthèse en est faite et sert de base à une étude d'impact simulée.

MRN 6001 (G) GESTION DE L'ENVIRONNEMENT

Étudier les problèmes de la gestion des ressources renouvelables et non renouvelables d'un point de vue interdisciplinaire: biologie, chimie, ingénierie, sociologie, économique, physique, industriel et politique. Application des notions scientifiques aux problèmes socio-économiques relatifs à l'utilisation de la nature. Détermination des connaissances scientifiques préalables à la planification de l'utilisation optimale des ressources. Études des méthodes d'acquisition de ces connaissances. Préparation de modèles. Application des résultats en termes de gestion.

Département des sciences du loisir

SLO 1012 ( ) RÉCRÉATION ET MILIEUX NATURELS

Étude des interrelations entre l'homme et son environnement naturel. Composante humaine: l'homme et la dimension loisir. Composante environnement: le milieu, support et ressources pour la récréation. Équilibre dynamique: utilisation et conservation. L'aménagement récréatif en milieux naturels.

RECHERCHE ET TRAVAUX PERSONNELS:

Vaillancourt, G. CHIMIE-BIOLOGIE

Relations entre faune et biotope au sein des écosystèmes fluviaux et estuariens du Saint-Laurent. Élaboration de méthodologies pour l'étude d'impacts.

ACTIVITÉS:

A. 1) *Baccalauréat en biologie*

Le programme veut mettre un accent particulier sur l'aspect pratique des études biologiques. L'étudiant est confronté soit avec l'environnement naturel (option bio-écologie), soit avec l'étude en laboratoire (option biologie expérimentale). Les étudiants apprennent à développer des solutions adéquates dans la gestion de l'environnement et dans l'utilisation rationelle des ressources du milieu.

2) *Certificat de premier cycle en sciences de l'environnement*

Ce programme multidisciplinaire a pour objectifs d'orienter les étudiants vers une conceptualisation de l'environnement, l'acquisition de connaissances de base, et de leur fonctionnement et de leurs interactions. Il s'adresse plus particulièrement à des personnes oeuvrant dans le domaine des sciences de l'environnement. Il est aussi conçu en fonction de personnes désireuses d'accéder à une formation générale.

3) *Maîtrise en sciences de l'environnement* (M.Sc.)

Ce programme de type recherche a pour but de former des scientifiques aptes à la recherche interdisciplinaire. L'acquisition de l'autonomie scientifique nécessaire aux praticiens de l'environnement est favorisée.

Les principaux champs d'intérêt du programme sont l'étude des écosystèmes aquatiques, palustres et terrestres. Les candidats acquièrent une compétence générale en sciences de l'environnement, mais dans un thème spécifique. Ils peuvent choisir comme thème une étude d'évaluation environnementale.

B. Programme spécifique aux évaluations environnementales?

Dans le programme de maîtrise en sciences de l'environnement, les étudiants peuvent choisir un thème qui inclut un problème d'évaluation environnementale.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

PROGRAM ACTIVITIES:

A. 1) *Baccalauréat en biologie*

This B.Sc. program stresses the practical application of biological studies. Students may chose either bio-ecological option which emphasizes the study of the natural environment, or the experimental biology option which stresses laboratory work. Students learn the principles of environmental and resource management.

2) *Certificat de premier cycle en sciences de l'environnement*

The purpose of this multidisciplinary B.Sc. program is to teach students the basic principles of the environmental sciences, as well as their interaction. It is for the student already involved in the environmental sciences or those seeking a general education in the field.

3) *Maîtrise en sciences de l'environnement*

The objective of this M.Sc. program is to educate scientists in multidisciplinary research. Emphasis is placed on the study of aquatic, marsh or terrestrial ecosystems. Students acquire general competence in the environmental sciences, but must specialize in a particular field, such as environmental assessment.

B. EIA Core Program or Streaming?

If they wish, students may study a problem in EIA as their area of specialization for their M.Sc. in environmental sciences.

C. Activities Related to EIA: None indicated.

UNIVERSITÉ DU QUÉBEC
INSTITUT NATIONAL DE LA RECHERCHE SCIENTIFIQUE — (INRS)

1) GÉNÉRAL

Location/Endroit: Sainte-Foy, Québec

Mailing Address:/
Adresse: Secrétariat général
Institut national de la
recherche scientifique
2700, rue Einstein
Case postale 7500
Sainte-Foy, Québec
G1V 4C7

L'Institut national de la recherche scientifique (INRS) a été créé au sein de l'Université du Québec. Sa mission est la recherche fondamentale et appliquée ainsi que les études avancées (de deuxième et de troisième cycle). Il s'est constitué en un réseau de huit centres de recherches dont les thèmes représentent des priorités scientifiques québécoises: l'eau, l'océanologie, l'énergie, les géoressources, l'urbanisation, la santé, les télécommunications, et l'éducation. Tous ces centres sont localisés dans des villes où ils peuvent susciter, entre autres, une collaboration avec les milieux de la recherche, qu'ils oeuvrent dans les secteurs universitaire, industriel ou gouvernemental. L'Institut compte 250 membres dont environ 75 professeurs-chercheurs.

2) INRS-EAU

Mailing Address/
Adresse: INRS-Eau
2700, rue Einstein
Case postale 7500
Sainte-Foy, Québec
G1V 4C7

PROGRAMMES D'ÉTUDES:

L'INRS — Eau décerne une maîtrise en sciences de l'eau (M.Sc.) et un doctorat en sciences de l'eau (Ph.D.).

Le laboratoire se trouve à Ste-Foy, Québec

COURS:

EAU 7104	(G)	POTAMOLOGIE
EAU 7141	(G)	ASPECTS JURIDIQUES RELATIFS AU DOMAINE HYDRIQUE
EAU 7142	(G)	LA GESTION DE L'EAU ET SON CONTEXTE ÉCONOMIQUE
EAU 7242	(G)	ANALYSE DE SYSTÈME DE LA RESSOURCE EAU

PROGRAMMES DE RECHERCHE:

Programme gestion et aménagement de la ressource

Le programme englobe des activités de recherche sur l'analyse des politiques de l'eau et sur le développement d'une meilleure compréhension du processus gestionnaire. Les activités de recherche regroupent les sujets suivants: mise au point et utilisation de modèles conduisant à l'aménagement optimal de la ressource, comme l'analyse décisionnelle et l'analyse de système; développement et usage de modèles prévisionnels, telle l'analyse prospective; élaboration de méthodes d'évaluation des impacts environnementaux de projets d'aménagement; étude du processus de gestion de l'eau et, notamment, développement d'un cadre méthodologique pour la gestion efficiente.

Programme dynamique chimique et biologie du milieu aquatique

L'étude d'écosystèmes aquatiques et les répercussions de certaines perturbations d'origine anthropique.

Programme hydrologie

L'étude des phénomènes hydrologiques et le développement d'outils d'estimation, d'analyse, de simulation et de prévision de phénomènes hydrologiques et météorologiques.

RECHERCHE ET TRAVAUX PERSONNELS:

Couillard, D.	Méthodes d'évaluation des impacts; d'évaluation des techniques pour l'évaluation d'impact d'un type de projet donné; analyse de systèmes appliquée aux problèmes de l'eau.
Sasseville, J.L.	Approche systémique à la gestion: théories, méthodes et cas; l'évaluation des répercussions environnementales, une approche systémique au contrôle de la qualité des actions humaines.

3) INRS — OCÉANOLOGIE

Mailing Address/
Adresse: INRS-Océanologie
310, avenue des Ursulines
Rimouski, Québec
G5L 3A1

PROGRAMME D'ÉTUDES:

INRS-Océanologie et l'Université du Québec à Rimouski (UQAR) développent conjointement le domaine de l'enseignement et de la recherche en océanographie. L'UQAR est

responsable des programmes d'enseignement et de la recherche fondamentale tandis que l'INRS-Océanologie développe des programmes de recherche orientée et appliquée. Le laboratoire se trouve à Rimouski, Québec.

PROGRAMMES DE RECHERCHE:

Le milieu physique côtier

Les chercheurs se préoccupent de l'étude des processus littoraux par des projets de recherche relatifs à la dynamique sédimentaire littorale et, surtout, à l'hydro dynamique côtière. Ils s'intéressent aussi aux aménagements côtiers: leur étude concerne les impacts de ces aménagements côtiers et le développement de modèles de prévision d'impact de ces mêmes aménagements.

La recherche halieutique

RECHERCHE ET TRAVAUX PERSONNELS:

Drapeau, G. Études d'impact

PROGRAMME ACTIVITIES:

1) *INRS — GENERAL*

L'Institut national de la recherche scientifique (INRS) is part of the Université du Québec. It was created to carry out basic and applied research, as well as to provide study programs which lead to post-graduate degrees (i.e. masters and doctorates). The INRS consists of a network of eight research centres, each specializing in work considered to be of special importance to the Province: water, oceanography, energy, georesources, urbanization, health, telecommunications and education. Each centre is located in a city where researchers from universities, industry and government can best collaborate.

2) *INRS-EAU*

The INRS-Eau offers both an M.Sc. and a Ph.D. degree in the science of water. Its laboratory is situated in Ste-Foy, Quebec. INRS-Eau has four core programs:

- *Water resources management* — a study of water, its use and management implications; EIA methodology and water; design of models for water's best use and management.

- *Chemical and biological dynamics of the aquatic environment* — aquatic ecosystems and man-made perturbations.

- *Pollution control*

- *Hydrology*

3) *INRS-OCÉANOLOGIE*

The laboratory of INRS-Océanologie is located at Rimouski. It collaborates in research and graduate studies chiefly with the Université du Québec à Rimouski. Research programs include coastal zone management and aquaculture.

QUEEN'S UNIVERSITY

Location/Endroit: Kingston, Ontario

Mailing Address/ Adresse: Queen's University
Kingston, Ontario
K7L 3N6

TEACHING:

School of Urban and Regional Planning

SURP 817 (G) ENVIRONMENTAL PLANNING LAW AND ADMINISTRATION

The course examines some of the policy issues related to planning the environment and the legal processes by which competing demands upon the environment are resolved and environmental objectives are realized. The preparation of environmental impact statements and other methods of environmental regulation will be considered. Instructor: R.W. Mackenzie.

SURP 824 (G) ECOLOGICAL CONCEPTS AND PRINCIPLES FOR PLANNERS

Analysis of basic ecological principles describing environmental dynamics. Identification of the spectrum of effects man's activities will have on the environment. Ecosystems approach to managing environmental systems. Application of ecological principles and concepts to development of methods for environmental planning. Instructor: P. Neice.

SURP 832 (G) REGIONAL ENVIRONMENTAL PLANNING AND MANAGEMENT

Organization of man-environment relationships into issue areas and concerns from the viewpoint of public policy. Identification of the roles and activities undertaken by the environmental planner. Analysis of environmental planning processes and their application in the preparation of an environmental impact statement. Investigation of the functions of administrative organizations and the degree of commitment of policy priorities given to environmental problems. Instructor: P. Neice.

SURP 871 (G) SOCIAL PLANNING

Concepts of planning theory applied to the selection of social goals by the public authority, and the setting of targets for their achievement; the application of social values and action criteria to the assessment of programs undertaken in pursuit of economic or political goals; use of SIA methodology in case studies; optimizing payoffs from expenditures on social services. Instructor: M.A. Qadeer.

Department of Civil Engineering

CIVL 282 (2) ENVIRONMENTAL ENGINEERING 1

Students are first instructed at a descriptive level upon the technologies of organic chemistry notation, fuels, air pollution, water pollution, solid waste and atomic energy. Some time is then spent indicating the process of decision-making on environmental issues with impact assessments and hearings. The effects of politics, law, economics, sociology and the influences of the media and pressure groups upon any decision is also discussed. Instructor: J.D. Boadway.

Department of Geography

38.306 (3) ARCTIC ENVIRONMENTS

Topics will include history of northern development, terrain sensitivity, marine environments, problems of transportation, and construction, ecological responses, special problems of pollution, and management of northern resources. Instructor: R. Gilbert.

Department of Biology

12.300 (3) GENERAL ECOLOGY

Students are exposed to EIA through terms that would be useful to them in future work and which would allow them to become better citizens. The chief aim of the module is to integrate ecological knowledge with knowledge of legal and regulatory processes.

Department of Economics

ECON 390 (3) NATURAL RESOURCE ECONOMICS

The study of the exploitation and conservation of natural resources such as fisheries, forestry, minerals and energy, and the implications for

public policy using tools of economic analysis. Issues relating to the quality of the environment and role of natural resources in the growth and development of the economy are also emphasized.

INDIVIDUAL RESEARCH AND WORK:

Crowder, A. — BIOLOGY

Public perception and carrying capacity; screening regular parks' actions to determine which need environmental review; determining environmental indices.

Gilbert, R. — GEOGRAPHY

Research for Petro-Canada on littoral environments of the coast of Cumberland Peninsula (Baffin Island); environmental studies.

Graham, K. — SCHOOL OF PUBLIC ADMINISTRATION/CENTRE FOR RESOURCE STUDIES

Evaluation of funding for public participation; oil and gas development in the Beaufort Sea; relationship between development companies and senior levels of government with local governments in central and eastern Arctic.

Harmsen, R. — BIOLOGY

Development of community indices for use in environmental impact studies and assessment for ecological reserves, to replace the less effective older system of indicator species; equilibrium theory in natural and man-made ecosystems, including arctic tundra systems and tropical rain forests. The effects of pesticide applications on biological community complexity and stability.

Rutherford, G.K. — GEOGRAPHY

EIA as it relates to mineral development; environmental monitoring and land reclamation of mine sites.

PROGRAM ACTIVITIES:

A. 1) *School of Urban and Regional Planning*

Current research is focused on such topics as revitalization of small towns, urban land markets, techniques of environmental impact assessment, patterns of northern towns, policy analysis techniques, and social impact assessment.

2) *Department of Geography*

EIA is considered primarily as it relates to physical earth processes, particularly in the context of northern Canada.

3) *Centre for Resource Studies*

The Centre has been involved in a major research study, the Eastern Arctic Study. This study has examined the relationship between resource development companies and senior levels of government with local governments in the central and eastern Arctic. The issue of EIA/SIA emerged as prominent in many of the case studies examined on specific mine developments and/or exploration activities.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA:

The School of Urban and Regional Planning has been involved in seminars and workshops on topics related to EIA.

ACTIVITÉS:

A. 1) *School of Urban and Regional Planning*

Les travaux de recherche actuels portent sur des sujets tels que la revitalisation des petites villes, le marché des terres urbaines, les diverses techniques d'évaluation des incidences environnementales pour les villes des territoires nordiques, les méthodes d'analyse des politiques et les évaluations des impacts sociaux.

2) *Department of Geography*

Le département étudie l'évaluation environnementale surtout en rapport avec les processus physiques et terrestres, en particulier dans le Nord canadien.

3) *Centre for Resource Studies*

Le Centre d'études des ressources a participé à un projet de recherche important, l'Étude de l'Est de l'Arctique. Au cours de cette étude, on a examiné le rapport entre, d'une part, les compagnies d'exploitation des ressources et les paliers supérieurs de gouvernement et, d'autre part, les administrations locales dans le Centre et dans l'Est de l'Arctique. La question des évaluations environnementales et sociales est apparue comme un point très important dans un grand nombre de cas d'exploitation minière ou d'activités d'exploration étudiés.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales:

L'École de planification urbaine et régionale a participé à l'organisation de séminaires et d'ateliers sur des sujets relatifs à l'évaluation environnementale.

THE UNIVERSITY OF REGINA

Location/Endroit: Regina, Saskatchewan

Mailing Address/ Adresse: The University of Regina
Regina, Saskatchewan
S4S 0A2

TEACHING:

Faculty of Engineering

ENGIN 320 (3) INDUSTRIAL IMPACT AND REGULATION

A study of the various impacts of industrial facilities, including air and water pollution, solid wastes and noise. The regulation of industrial impacts is discussed. Instructor: T. Viraraghavan.

ENGIN 421 (4) ENVIRONMENTAL DESIGN AND IMPACT

Legal and administrative considerations for environmental assessment and methods for preparing an environmental impact statement. Canadian and international approaches are compared. Instructor: F.A. Curtis.

Department of Geography

GEOG N 826 (G) SEMINAR ON RESOURCES MANAGEMENT

Methods of watershed management are discussed, including biophysical assessment, resource evaluation methods, environmental assessment, computer modelling techniques, project evaluation methods and policy making. Instructor: F.A. Curtis.

INDIVIDUAL RESEARCH AND WORK:

Bolton, K. GEOGRAPHY

Evaluation of the South Saskatchewan River Project: the social and economic effects, and the environmental impacts on the surrounding area relative to flooding in the Qu'Appelle Valley (M.Sc. Research).

Curtis, F.A. FACULTY OF ENGINEERING

Development of EIA methods for local private projects (e.g. shopping centres, residential/commercial development) and public projects (e.g. solid waste management, heavy oil upgrades, rail relocation).

Harding, J. SCHOOL OF HUMAN JUSTICE

SIA research in northern Saskatchewan, funded by the Social Sciences and Humanities Research Council of Canada; to model the views of interest groups on the impacts of uranium mining through a content analysis of transcripts from the Cluff Lake and/or Key Lake boards of inquiry (1984-1985).

Ralph, D. SCHOOL OF SOCIAL WORK

SIA research in northern Saskatchewan; social impact of development in forestry and uranium mining on northern native people; alternative community-based economic development strategies.

PROGRAM ACTIVITIES:

A. 1) *School of Human Justice*

Research undertaken by the School stresses social impact assessment issues as one of the main priorities. In particular, study focuses on the interaction between indigenous people, and environmental and social impact assessment.

2) *Faculty of Engineering*

EIA is approached from the perspective of the design and impact of public projects and industrial facilities. The courses which are offered are at the undergraduate level.

3) *Canadian Plains Research Center*

The Center serves as a resource for research and teaching activities concerning Canadian Plains. It publishes research findings and sponsors research projects, seminars, lectures and workshops, and is the base for the CANPLAINS Research Inventory.

The CANPLAINS Research Inventory contains over 13,000 records of research. Its capabilities include:

a) lists of researchers working in specific subject areas;

b) directories of research on specific topics;

c) lists of funded research;

d) a general overview of research which has been completed; and

e) lists of prairie-related theses.

The Center also publishes a newsletter, "Canadian Plains Bulletin" which promotes a research network, and a semi-annual scholarly journal, *Prairie Forum*.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA:

The Prairie Justice Research Consortium, School of Human Justice, and the Social Administration Research Unit, Faculty of Social Work, co-sponsored an Introductory Workshop on Participatory Research, February 3-4, 1984.

ACTIVITÉS:

A. 1) *School of Human Justice*

Les recherches entreprises à l'école font ressortir l'aspect prioritaire de l'évaluation des incidences sociales. On étudie en particulier l'interaction entre les autochtones et l'évaluation environnementale et sociale.

2) *Faculty of Engineering*

On y étudie les évaluations environnementales du point de vue de la conception et des incidences des projets publics et des installations industrielles. Les cours sont donnés à l'intention des étudiants non diplômés.

3) *Canadian Plains Research Center*

Le centre s'occupe des activités de recherche et d'enseignement qui ont trait aux plaines du Canada. Il commandite des projets de recherche, des séminaires, des conférences et des ateliers, et il exploite la base de données CANPLAINS. Cette base contient plus de 13 000 enregistrements qui se rapportent à la recherche, dont:

a) des listes de chercheurs qui travaillent dans des domaines particuliers;

b) des répertoires de travaux de recherche sur des sujets particuliers;

c) des listes de travaux de recherche subventionnés;

d) un aperçu général des travaux de recherche qui ont été terminés; et

e) une liste des thèses relatives aux plaines.

Le Centre publie aussi un bulletin intitulé «The Canadian Plains Bulletin» qui favorise l'établissement d'un réseau de recherche.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales:

Le «Prairie Justice Research Consortium» de la «School of Human Justice» et la «Social Administration Research Unit» de la «Faculty of Social Work» ont co-commandité un atelier intitulé «Introductory Workshop on Participatory Research,» les 3-4 février 1984.

RYERSON POLYTECHNICAL INSTITUTE

Location/Endroit: Toronto, Ontario

Mailing Address/ Adresse: Ryerson Polytechnical Institute
350 Victoria St.
Toronto, Ontario
M5B 2K3

TEACHING:

Department of Applied Geography

GEO 506 (3) RECREATIONAL STUDIES I

This course provides a broad understanding of the spatial behavior of recreationists including the analysis of methodologies suitable for the assessment of the various impacts of this behavior. Instructor: P. Williams.

GEO 604 (3) RESOURCE AND ENVIRONMENTAL LEGISLATION AND DECISION-MAKING

The major theme developed in the course involves the analysis of complex resource and environmental problems. In many cases such problems involve the consideration of a wide variety of data and of a number of objectives. General methods of dealing with such situations are presented and a detailed review of environmental impact assessment is undertaken. Instructor: M. Bardecki.

GEO 606 (3) RECREATIONAL STUDIES II

Instructor: P. Williams.

GEO 702 (4) EXPLORATIONS IN ENVIRONMENTAL ISSUES

A senior elective course reviewing a wide range of environmental issues of general interest. Instructors: M. Bardecki, D. Banting.

GEO 709 (4) DEVELOPMENT AND ENVIRONMENTAL LAW

This course reviews the current form and practice of development and environmental law in Canada and Ontario. Emphasis is placed on land use control and the development process, on public welfare statutes for environmental protection, and on the role of administration boards. Instructor: A. Zweig.

School of Urban and Regional Planning

UPN 300 (3) THEORIES IN REGIONAL PLANNING

Environmental planning movements and methods are reviewed for their application to Canadian regional planning. Institutions established to carry out EIA or similar functions are reviewed. Students may select the study of environmental agencies as the subject of their research in this or subsequent courses. Instructors: J. Mars, E. Samery.

UPN 410 (4) PLANNING ANALYSIS II

Quantitative methods aimed at evaluation are covered, including cost-benefit analysis, program evaluation, and technological forecasting. Laboratory work consists of a number of major survey research projects. Many of these are EIA projects: analysis of surveys of cottager communities, investigations of urban residents' perceptions of environmental quality, and energy efficiency activities by home renovators. Instructors: J. Mars, C. Conway, C. Harling.

UPN 525 (4) CURRENT ISSUES IN URBAN AND REGIONAL PLANNING

Two recent topics covered which contribute to EIA:

Regional Impact Analysis: Special treatment of practical impact assessment methods with student projects to write RFPs and proposals for small-scale studies. Instructors: J. Mars, R. Crow.

Energy Policy Planning: Runs scenarios of various energy futures in Ontario, in order to explore impacts of policies. Utilizes computer models of sectoral fuel usage. Instructor: C. Conway.

INDIVIDUAL RESEARCH AND WORK:

Bardecki, M. GEOGRAPHY

Environmental impacts of agricultural land drainage in southern Ontario.

Duerden, F. GEOGRAPHY

Land use; impacts of Indian land claims.

Nakashima, L.	GEOGRAPHY Environmental characteristics of dredged lagoons.
Williams, P.	GEOGRAPHY Economic and social impacts of ski area developments.

PROGRAM ACTIVITIES:

A. 1) *Department of Applied Geography*

The program of Environmental and Resources Management offered by the department emphasizes the study of management and planning policies that address conflicts arising as economic development severely reduces the physical resource base and strains the quality of the natural environment. Students must intern to gain practical experience. EIA is also studied as it relates to recreational resources development.

2) *School of Urban and Regional Planning*

The program considers EIA, planning, and the importance of public involvement within this process. Regional environmental institutions receive thorough attention.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA: None indicated.

ACTIVITÉS:

A. 1) *Department of Applied Geography*

Le programme de gestion de l'environnement et des ressources offert par ce département met l'accent sur l'étude des politiques en matière de gestion et de planification se rapportant aux conflits qui naissent lorsque le développement économique réduit considérablement les ressources physiques et diminue la qualité de l'environnement naturel. Les étudiants doivent faire un stage pour acquérir une expérience pratique. On étudie aussi l'évaluation environnementale dans le domaine de la mise en valeur des ressources qui servent aux loisirs.

2) *School of Urban and Regional Planning*

Le programme traite de l'évaluation environnementale du point de vue de la planification et de l'importance de l'engagement du public dans ce processus. Les institutions environnementales régionales reçoivent une attention particulière.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

SAINT MARY'S UNIVERSITY

Location/Endroit: Halifax, Nova Scotia

Mailing Address/ Adresse: St. Mary's University
Halifax, Nova Scotia
B3H 3C3

TEACHING:

Departments of Anthropology and Geography

ANT 319 / GPY 319 (3) CULTURAL ECOLOGY

Introduction to the study of the relationship between man and his environment, ranging from hunting and gathering societies to modern commercial societies. The course considers men as functional entities in ecosystems and the various strategies and information sources used by societies in their interaction with environments.

Department of Geography

GPY 404 (3) COASTAL ZONE MANAGEMENT

A systematic analysis of the coastal zone, its components and the problems raised by its development. A comprehensive approach is taken towards assessing various management approaches and their implications. Instructor: P. Ricketts.

Atlantic Canada Studies

ACS 630 ( ) SEMINAR ON ATLANTIC CANADA ECOLOGY AND RESOURCES

An investigation into the ecology of the Atlantic Canada region and of the prospects for the rational use of natural resources and energy. Under the guidance of specialists and experts, students will be presented with a synthesis of scientific, technological, economic, political and sociological imperatives which bear upon the exploration of natural wealth in any society.

Department of Sociology

SOC 310.0 (2) SOCIETY AND THE ENVIRONMENT

This course will be an examination of selected Nova Scotia environmental issues: acid rain, forestry/wildlife, toxic wastes, and uranium exploration and mining, from an ecological perspective. The class will address the basic question: can environmental problems be resolved within our society? Students will be expected to analyze critically the perspectives of the provincial and federal governments, industry and environmental organizations.

SOC 351 SPECIAL TOPICS IN RESOURCE EXPLOITATION AND ENVIRONMENT

SOC 372.1 (2) SOCIAL IMPACT ANALYSIS

This course is designed to provide the student with an introduction to social impact analysis, in particular the effect of large-scale development projects and government projects on society. As such it covers the design of analytical frameworks, the application of appropriate research methodologies and the development of social impact models.

INDIVIDUAL RESEARCH AND WORK:

Ricketts, P. GEOGRAPHY

Bay of Fundy/Gulf of Maine/Georges Bank (FMG) Atlas: a resource and environmental atlas of the FMG Marine Region, currently being undertaken in co-operation with Dalhousie University (Ocean Studies Program); shoreline erosion and human impact; Editor: *Studies in Marine and Coastal Geography*.

PROGRAM ACTIVITIES:

A. None indicated.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA: None indicated.

ACTIVITÉS:

A. Aucune.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

UNIVERSITY OF SASKATCHEWAN

Location/Endroit: Saskatoon, Saskatchewan

Mailing Address/ Adresse: The University of Saskatchewan
Saskatoon, Saskatchewan
S7N 0W0

TEACHING:

Department of Geography

GEOG 381.3 (3) GEOGRAPHY OF NORTHERN DEVELOPMENT

This course explores the question of development in northern Canada. The framework for this geographical analysis is provided by the Core/Hinterland Theory. Within this theoretical framework, major resource development will be examined and the regional impact analyzed. Special attention will be placed upon resource development conflicts. Instructor: B. Bone

GEOG 847.3 (G) GEOGRAPHY OF NORTHERN DEVELOPMENT

This seminar deals with problems of development in northern Canada and the application of geographic methods to solve these problems. Students will participate in these discussions by presenting their critical comments on various development questions and by giving written reports on case examples. Instructor: R. Bone.

College of Law

LAW 444.3 (4) ENVIRONMENTAL LAW

The course examines processes by which competing demands upon the environment are reconciled and environmental objectives realized. Existing legal techniques to combat environmental degradation will be examined, including common law remedies and various models of environmental legislation. A series of particular problems arising in the area of environmental control will be studied to assess the success of these existing mechanisms and proposals for new directions in the field will be considered. Instructor: M.A. Bowden.

Department of Civil Engineering

CE 456.2 (4) ENVIRONMENTAL CONTROL ENGINEERING

Quality changes occurring in the natural environment and those resulting from man's activities in developing water for domestic, industrial and irrigation use are outlined. Interbasin and international water transport schemes are detailed. The environmental changes associated with extraction of minerals and of power generation are developed. Environmental impact assessment procedures are studied in relation to the above activities. The engineering and environmental impact of future alternative energy sources are discussed as time and interest in specific topics allow. Instructor: E. Davis.

Department of Crop Science and Plant Ecology

PLEC 213.3 (2) PRINCIPLES OF ECOLOGY

Principles of ecology are examined in relation to man's use of ecosystems for food, fiber and shelter. Emphasis is placed on energy flow and cycling of materials in relation to productivity. EIA is introduced through the use of case studies examining such topics as the potash industry. Instructor: R.E. Redmann.

Department of Sociology

SOC 308 (3) COMMUNITY DEVELOPMENT IN CANADA

A sociological examination of community development concepts and approaches, relevant models, processes, contexts ideologies and attitudes, policies, and methods of evaluation will be undertaken. Consideration will also be given to the roles of the citizen, development agents, and selected target populations such as poverty groups and native peoples.

INDIVIDUAL RESEARCH AND WORK:

Archibold, W. GEOGRAPHY

Environmental impact of heavy metals from uranium tailings.

Bone, R.M. GEOGRAPHY

Design, development and implementation of a data base and monitoring system for the Norman Wells oil development and pipeline project for the Department of Indian Affairs and Northern Development.

Bowden, M.A.	COLLEGE OF LAW Text/Workbook on environmental impact assessment (with F.A. Curtis, University of Regina); environmental assessment legislation; environmental degradation; offshore rights and environmental assessment.
Redmann, R.E.	CROP SCIENCE AND PLANT ECOLOGY Environmental impact of mining in Canada; environmental impact of airborne salts.

PROGRAM ACTIVITIES:

A. 1) *College of Law*

Environmental and social assessment are examined as they relate to the regulation of pollution on resources development. Also of interest are public participation and the hearings process, and the various legislative and non-legislative procedures that are the underpinnings of EIA across the country.

2) *Department of Geography*

A major focus of the teaching and research in the department is land use planning. It is in this light that EIA/SIA are primarily studied. Northern development problems are also of interest to some faculty members.

3) *Department of Civil Engineering*

Environmental impact assessment is studied in relation to quality changes that occur in the natural environment as a result of man's activities.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA: None indicated.

ACTIVITÉS:

A. 1) *College of Law*

On y étudie l'évaluation des incidences environnementales et sociales du point de vue de la réglementation applicable à la pollution ou à l'exploitation des ressources. Comme autres sujets d'étude intéressants, il y a la participation du public et le processus des audiences ainsi que les diverses mesures législatives et autres qui sont la base de l'EIE au pays.

2) *Department of Geography*

La planification de l'utilisation des terres est l'un des principaux sujets d'enseignement et de recherche dans ce département, et c'est surtout sous cet aspect qu'on traite de l'évaluation environnementale et sociale. En outre, certains membres du département s'intéressent aux problèmes de la mise en valeur du Nord.

3) *Department of Civil Engineering*

On étudie l'EIE en rapport avec les changements dans la qualité de l'environnement naturel résultant de l'industrie humaine.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales. Aucunes.

UNIVERSITÉ DE SHERBROOKE

Location/Endroit: Sherbrooke, Québec

Mailing Address/ Adresse: Université de Sherbrooke
Sherbrooke, Québec
J1K 2R1

COURS:

Département de géographie

GEO 406 ( ) IMPACT DE L'HOMME SUR SON MILIEU

Le cours est une initiation à la problématique de l'environnement et veut montrer les effets de l'action de l'homme sur le milieu. Comme le sujet est vaste et complexe, l'approche utilisée consiste à donner d'abord une vue d'ensemble des impacts des diverses activités humaines sur le milieu et en conséquence sur les écosystèmes pour ensuite compléter par l'étude d'un ou plusieurs cas. Coordonnateur: A. Poulin.

GEO 410 ( ) UTILISATION DU SOL ET ENVIRONNEMENT

Il y a trois objectifs du cours: connaissance de l'utilisation du sol et de ses effets sur l'environnement; connaissance des méthodes de préparation des rapports d'impacts sur l'environnement; et intégration du géographe dans un équipe interdisciplinaire. Coordonnateur: A. Poulin. (cours à option de maîtrise en environnement. Voir Activités).

GEO 708 (G) SÉMINAIRE DE RECHERCHE EN UTILISATION DU SOL ET EN ENVIRONNEMENT

Le séminaire de recherche en utilisation du sol porte sur quatre thèmes: l'évaluation des impacts; l'érosion des sols; aspects visuels et esthétique de l'utilisation du sol; la cartographie de l'environnement. Coordonnateur: A. Poulin.

Département de biologie

ECL 300 ( ) L'ENVIRONNEMENT ET L'HOMME

Présentation de différents thèmes d'actualité. Les populations humaines: évolution, dynamique et conséquences de la surpopulation. L'énergie: l'énergie de la biosphère, l'énergie et l'homme, problèmes de l'environnement liés à l'exploitation des différentes sources d'énergie. L'agriculture: historique et caractéristiques de l'agriculture moderne. La pollution de l'air et la pollution de l'eau: vue d'ensemble (cours à option de maîtrise en environnement. Voir Activités). Coordonnateur: R. Saucier.

PBI 712 (G) GESTION DE L'ENVIRONNEMENT

L'objectif premier de ce cours est de donner à l'étudiant des notions pratiques de la gestion de l'environnement, par une équipe multidisciplinaire oeuvrant dans le milieu avec toutes les contraintes que cela implique.

Le cours comporte quatre volets dont les deux premiers sont une mise en situation de ce que l'on conçoit comme «environnement» et comme structure organisationnelle pour le gérer. Le volet trois comporte l'essentiel du cours et passe en revue toutes les activités qui sont gérées par la Direction régionale du ministère de l'Environnement du Québec, de même que les outils pour ce faire. Enfin, le dernier volet est plutôt un exercice de prospective devant amener une réflexion sur la manière dont la gestion de l'environnement devra se faire dans les années 80 et 90. Coordonnateur: M. Provencher.

PBI 720 (G) BIOLOGIE DU MILIEU III

Discussion sur différents thèmes d'actualité et leurs conséquences sur l'environnement et l'homme: pluies acides, eutrophisation des lacs, écoulements d'huile accidentels et provoqués, résistance aux biocides, pesticides et herbicides, polluants industriels (métaux lourds, matériaux fibreux comme l'amiante). (Cours à option de maîtrise en environnement. Voir Activités). Coordonnateur: R. Saucier.

Faculté des sciences appliquées

SCA 761 (G) SÉMINAIRES EN ENVIRONNEMENT

Ce cours a pour but de rendre l'étudiant capable d'évaluer les effets d'un projet sur l'environnement et de rédiger des rapports d'impact sur l'environnement. (cours à option de maîtrise en environnement. Voir Activités). Coordonnateur: M. Beerli.

Faculté de droit

DRT 519 (G) DROIT DE L'ENVIRONNEMENT

Historique du droit de l'environnement. Rôle des pouvoirs publics et des ministères. Lois qui régissent les divers organismes. Rôle des particuliers: interventions, recours. Participation des citoyens à l'élaboration des normes régissant la qualité du milieu. Etude comparative de la législation canadienne avec celle de différents pays. (cours à option de maîtrise en environnement. Voir Activités). Coordonnateur: P. Chatillion.

RECHERCHE ET TRAVAUX PERSONNELS:

INSTITUT D'AMÉNAGEMENT

L'Institut d'Aménagement remplace le Centre de recherche en aménagement régional (CRAR) qui existait depuis 1970. Les projets principaux du CRAR sont: Trans-Canada Pipelines: aperçu régional des régions de l'Estrie et des Bois-Francs (1979); Trans-Canada Pipelines: aperçu régional du Saguenay/Lac Saint-Jean (1979); Conseil régional de développement des Cantons de l'Est: la région administrative de l'Estrie et l'application de la loi 125 (1981).

Poulin, A. GÉOGRAPHIE

Les routes et l'environnement.

Saucier, R. BIOLOGIE

Zonage écologique; étude des impacts des moteurs hors-bord sur la rivière Magog.

ACTIVITÉS:

A. 1) *Faculté des sciences appliquées*

Les départements de génie chimique et de génie civil offrent une concentration en environnement au niveau du premier cycle.

2) *Maîtrise en environnement*

Le programme de maîtrise en environnement vise à donner à des personnes de formation différente les outils nécessaires à la solution des problèmes reliés à l'environnement. De plus, ce programme leur fait connaître les aspects scientifiques, techniques et légaux de la protection du milieu de vie.

La contribution de différents spécialistes à l'étude des problèmes de l'environnement favorise la participation des étudiants tout en leur donnant une occasion privilégiée de discuter de leurs projets. L'étudiant acquiert aussi une expérience de recherche grâce à un stage effectué soit à l'Université, soit dans une industrie, soit encore au sein d'un organisme gouvernemental. Le stage porte essentiellement sur des problèmes d'intérêt pratique directement reliés à l'environnement. Le projet est réalisé au sein d'une équipe multidisciplinaire (ingénieurs, biologistes, etc.) dans un milieu de travail où il fera éventuellement carrière.

3) *Department of géographie*

Le Département de géographie fournit aux étudiants les outils de travail nécessaires pour faire les évaluations environnementales. Même si ce n'est pas une specialité, l'évaluation environnementale est examinée à fond dans plusieurs cours.

4) *Institut d'Aménagement*

L'institut remplace le Centre de recherche en aménagement régional qui existait depuis 1970.

L'Institut est en train de mettre sur pied un programme de cours intensifs destiné aux gestionnaires, ingénieurs, écologistes, environnementalistes, etc. sur la télédétection appliquée à l'environnement et à l'aménagement.

B. Programme spécifique aux évaluations environnementales?

Le programme de maîtrise en environnement offre aux étudiants la possibilité de participer à un groupe interdisciplinaire d'étude pratique dont le résultat est la production d'une étude d'impact environnemental (cours SCA 761).

C. Activités se rapportant aux évaluations environnementales: Aucunes.

PROGRAM ACTIVITIES:

A. 1) *Faculté des sciences appliquées*

The departments of chemical and civil engineering offer a concentration program in environmental engineering at the undergraduate level.

2) *Maîtrise en environnement*

The Masters program in environmental studies provides students from various scientific backgrounds with the tools necessary to solve problems related to environmental issues. Further, it introduces them to the scientific, technical and legal aspects of environmental protection. Students are instructed by specialists from a broad range of areas of expertise. They are also required to work on their own individual projects. As part of their program, students receive "hands-on" experience in the university, private industry or government.

3) *Département de géographie*

The Department's program provides students with the tools to work in EIA. Although there is no concentration in EIA, it is examined in detail in several courses.

4) *Institut d'aménagement*

L'Institut d'aménagement replaces the Centre de recherche en aménagement régional which has been in existence since 1970. The Institute is in the process of putting in place a program of intensive courses for engineers, ecologists, resource managers, and environmentalists etc., in the application of remote sensing techniques to environmental management.

B. EIA Core Program or Streaming?:

The program leading to a Maîtrise en environnement allows students to participate in a practical interdisciplinary study team which produces an environmental impact statement (course SCA 761).

C. Activities Related to EIA: None indicated.

SIMON FRASER UNIVERSITY

Location/Endroit: Burnaby, British Columbia

Mailing Address/ Adresse: Simon Fraser University
Burnaby, British Columbia
V5A 1S6

TEACHING:

Natural Resources Management Program

MRM 611-5 (G) POPULATION AND COMMUNITY ECOLOGY

A review of population, community, and ecosystem ecology; implications of these areas for methods of resource management and environmental assessment.

MRM 612-5 (G) MANAGEMENT MODELS OF BIOPHYSICAL RESOURCES

Methods of constructing simulation models and their uses in resource management and decision-making. Case studies of environmental modelling with emphasis on biological resources.

MRM 645-5 (G) RESOURCE DEVELOPMENT COMMUNITIES

Examination of the impact of resource development on communities in Canada. The course presents an overview of the social organization of resource-based communities and an analysis of the participatory process in decision-making in resource management.

MRM 646-5 (G) ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

Evaluation and application of current methodologies for social, economic and biophysical impact assessment. Instructor: J.C. Day.

MRM 651-5 (G) PROJECT EVALUATION

The course examines the role, limitations, and methods of benefit-cost analysis. Different measurement techniques are applied to the estimation of a range of benefits and costs. Market and non-market allocations are considered. Instructor: J. Richards.

Department of Geography

GEOG 421 (4) GEOGRAPHY OF RESOURCE DEVELOPMENT

Geographical aspects of development and management of natural resources. The course focuses on decision-making and institutions, frameworks, resource allocation technique (e.g., benefit-cost analysis), environmental and social impact assessment. Instructors: M. Barker, S. Wong.

GEOG 383 (3) REGIONAL PLANNING I

This course deals with the planning/decision-making process, including evaluation, as applied to problems of urban and regional planning.

GEOG 445 (4) RURAL PLANNING

This course addresses the problems of planning in rural areas which tend to be dominated by resource issues.

GEOG 444 (4) REGIONAL PLANNING II

This course addresses real-life planning/development issues.

INDIVIDUAL RESEARCH AND WORK:

Barker, M. GEOGRAPHY/NATURAL RESOURCES MANAGEMENT PROGRAM

Regional resource planning; flood loss mitigation policies in British Columbia and the State of Washington; tourism and recreation planning in mountain environments.

Day, J.C. NATURAL RESOURCES MANAGEMENT PROGRAM

International river basin management; environmental regulation; coastal zone management; landslide hazards; social impact assessment; environmental effects of B.C. Coal Guidelines.

Gunton, T. NATURAL RESOURCES MANAGEMENT PROGRAM

Regional development; impact evaluation of mega projects; regional resource planning; mineral policy; environmental effects of B.C. Coal Guidelines.

Peterman, R.	NATURAL RESOURCES MANAGEMENT PROGRAM Simulation modelling of various ecological systems.
Roberts, M.C.	NATURAL RESOURCES MANAGEMENT PROGRAM Land suitability model for the evaluation of land use change.

PROGRAM ACTIVITIES:

A. 1) *Department of Geography*

Environmental and social impact assessment are addressed from the point of view of land use and land use planning. Courses associated with EIA/SIA are offered at the undergraduate level.

2) *Natural Resources Management Program*

This is a professional program designed for individuals with experience in private organizations or public agencies dealing with resources, and for recent graduates in various disciplines related to natural resources management. All courses are scheduled in the evening from time to time to permit students to complete the program on a part-time basis. EIA/SIA are part of both teaching and research.

B. EIA Core Program or Streaming?:

No, although students may follow a line of study specializing in these areas.

C. Activities Related to EIA: None indicated.

ACTIVITÉS:

A. 1) *Department of Geography*

On y étudie l'évaluation des incidences environnementales et sociales du point de vue de l'utilisation des terres et de la planification en ce domaine. Des cours connexes sont offerts aux étudiants non diplômés.

2) *Natural Resources Management Program*

C'est un programme de niveau professionnel à l'intention des personnes qui ont acquis de l'expérience dans des organisations privées ou des organismes publics qui s'occupent des ressources ainsi que pour les récents diplômés dans diverses disciplines se rapportant à la gestion des ressources naturelles. Tous les cours sont donnés le soir de temps à autre pour permettre aux étudiants de suivre le programme à temps partiel. L'évaluation environnementale est l'un des sujets d'enseignement et de recherche.

B. Programme spécifique aux évaluations environnementales?

Non, bien que les étudiants aient la possibilité de suivre des cours menant à une spécialisation dans ce domaine.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

TECHNICAL UNIVERSITY OF NOVA SCOTIA

Location/Endroit: Halifax, Nova Scotia

Mailing Address/ Adresse: The Technical University of Nova Scotia
P.O. Box 1000
Halifax, Nova Scotia
B3J 2X4

TEACHING:

Department of Urban and Rural Planning

ARP 1206 (G) RURAL PLANNING

ARP 0313 (G) ENVIRONMENTAL STUDIES

ARP 2315 (G) ENVIRONMENT AND TECHNOLOGY

(offered at Dalhousie University)

ARP 2529 (G) NATURAL RESOURCES ADMINISTRATION IN CANADA

(offered at Dalhousie University)

ARP 2426 (G) SOCIAL AND ECONOMIC IMPACT ASSESSMENT

Canada's economic, social and political evolution has been and is characterized by the development of natural resources. This class will introduce the student to the theoretical, legislative and methodological perspectives of socio-economic impact assessment as a planning tool. In particular, the course will draw upon an increasing body of literature relating to the impacts of resource development. Instructor: A.G. Wilkie.

ARP 1530 (G) ENERGY AND PLANNING

The course will combine an examination of inclusion on energy-related factors in day to day planning practice with treatment of such special topics as: energy resource development in rural planning, energy accounting in environmental impact assessment and the role of energy in urbanization. Instructor: D. Procos.

Department of Civil Engineering

CE 5840 (5) POLLUTION CONTROL

Course emphasis is on training civil engineering students to conduct environmental impact assessments as part of a multi-disciplinary team.

INDIVIDUAL RESEARCH AND WORK:

Procos, D. URBAN AND RURAL PLANNING

Survey of impacts from fossil fuel extraction in the Mediterranean Basin; social and economic impact study for Mobil's Venture Field EIS.

Waller, D.H.
Hart, W.C.
Thirumurthi, D. CENTRE FOR WATER RESOURCES STUDIES

Halifax Urban Watersheds Program: impacts of urban development on lakes and their watersheds.

Wilkie, A. URBAN AND REGIONAL PLANNING

Socio-economic impact assessment of offshore energy developments in Scotland and east coast Canada; regional social change and the relevance of megadevelopments as catalysts for social change.

Wilkinson, B. URBAN AND REGIONAL PLANNING

The role of government in the management of hazardous industrial residuals: comparative study of firms ancillary to petroleum development. (Master's Research).

PROGRAM ACTIVITIES:

A. *Department of Urban and Regional Planning*

The activities of the Department are centred on a professionally-oriented approach to planning. Of particular interest are activities on offshore development.

B. EIA Core Program or Streaming?:

No, however, as in other institutions, students may choose this area as an area of specialized study, with the guidance of faculty.

C. Activities Related to EIA:

1) Mobil Oil Ltd. Scholarship of $5,000 to a graduate student studying impact assessment pertaining to energy projects.

2) Hosted Second International Conference on Oil and the Environment.

3) Public lectures and workshops on subjects about EIA/SIA.

ACTIVITÉS:

A. *Department of Urban and Regional Planning*

Les activités du département sont axées sur un aspect de la planification qui débouche sur une profession. On s'intéresse particulièrement à l'exploitation des ressources sous-marines.

B. Programme spécifique aux évaluations environnementales?

Non. Cependant, comme c'est le cas pour d'autres institutions, les étudiants peuvent choisir ce domaine et s'y spécialiser avec l'aide des professeurs.

C. Activités se rapportant aux évaluations environnementales:

1) Bourse de $5 000 accordée par Mobil Oil Ltd. à un étudiant diplômé pour étudier l'évaluation des incidences se rapportant aux projets énergétiques.

2) C'est à cette université que s'est tenue la deuxième conférence internationale sur le pétrole et l'environnement.

3) Conférences publiques et ateliers sur des sujets se rapportant aux évaluations environnementales.

UNIVERSITY OF TORONTO

Location/Endroit: Toronto, Ontario

Mailing Address/ Adresse: The University of Toronto
Toronto, Ontario
M5S 1A1

TEACHING:

Innis College

INI 220 (2) ENVIRONMENTAL RISK ASSESSMENT

An introduction to risk assessment concepts, methods and technologies, emphasizing the ecological basis of environmental problems and the Canadian socio-political management context. Instructor: A. Whyte

INI 320 Y (3) CANADIAN ENVIRONMENTAL ISSUES

An intensive examination of selected current Canadian environmental issues and the ways in which government, business, universities and citizen groups respond to them by policy and action. Instructors: B. Savan and M. Campbell.

INI 420 (4) ENVIRONMENTAL RESEARCH SEMINAR

This course is designed for advanced undergraduate study on selected environmental issues of current relevance, including policy problems related to environmental assessment. Students are encouraged to work as a team although individual projects are also acceptable. This course emphasizes the development of skills necessary to gather, interpret and present information on environmental issues. Instructor: B. Savan.

POL 454/F (4) POLITICS OF THE ENVIRONMENT

Instructor: G. Beakhurst.

Institute for Environmental Studies

ESE 1002 F (G) ENVIRONMENTAL LAW

An introduction to environmental law for students engaged in environmental studies: the legal methods available to resolve environmental problems and the scope and limits of those methods; common law and statutory "tools" as well as environmental assessment legislation, the problem of "standing to sue" and the limits of litigation. Instructor: J. Swaigen.

ESE 1005 F (G) ENVIRONMENTAL MANAGEMENT I

The focus is on choices in environmental management and on the basis for examining policy choices. Instructors: A.P. Grima, P. Byer

ESE 1006 (G) MAN-ENVIRONMENT THEORY II

An interactive model-building workshop, based on the adaptive environmental assessment and management approach. Instructors: J.B.R. Whitney and P.M. Stokes.

ESE 1007F (G) MAN-ENVIRONMENT THEORY I

Alternative cultural, historical and disciplinary views of man-environment relations. Focus on different explanations for environmental risks and human behaviour. Instructors: H.A. Regier and A. Whyte.

ESE 1008 S (G) ENVIRONMENTAL MANAGEMENT II

This course explores the management of toxic substances in the environment, from technological, ecological and institutional perspectives. The basis for the formulation of environmental standards and criteria will also be probed. Two major case studies will be used as vehicles for seminars and discussion papers. Instructors: P.M. Stokes, D. Mackay and A.P. Grima.

ESE 1210H (G) ENVIRONMENTAL RISK ANALYSIS I & II

Theory and methods of risk identification, measurement and estimation; social and economic evaluation of risk. Instructors: J. Dooley, I. Burton.

JPV 2606H ( ) POLITICS OF THE ENVIRONMENT I

Historical and ideological background to, and current practice of, decision-making on resource and environmental issues in Canada.

Emphasis on illustrative case studies. Instructor: M. Brownstone.

JPV 2607H ( ) POLITICS OF THE ENVIRONMENT II

Examination of political aspects of alternative proposals to address current resource and environmental problems. Evaluation of relevant ideological positions, tools, strategies and tactics. Instructor: M. Brownstone.

JBE 1434Y ( ) APPLIED ECOLOGY

Impacts of pollutants on the environment; ecosystem response to heavy metals, hydrocarbons, acid precipitation, pesticides, radiation and asbestos. Full course credit.

JBE 1435H ( ) TECHNIQUES IN APPLIED ECOLOGY

Laboratory techniques used in Applied Ecology (JBE 1434Y).

Department of Geography

GGR 332 H (3) ENVIRONMENTAL RISKS AND HAZARDS OF DEVELOPMENT

Studies of the exacerbation of natural and man-made environmental hazards in developing countries. An exploration of the methods of risk assessment and hazard management in an international context.

GGR 356 H (3) ENERGY-ENVIRONMENT INTERACTION

Case studies of specific environmental impacts due to energy generation, transmission and consumption. Environmental aspects of nuclear, fossil-fuel, and hydroelectric generating systems, including the carbon dioxide effect. Energy requirements of specific resource-development activities. Energy conservation and economic growth.

GGR 1400 S (G) GEOGRAPHIC PERSPECTIVES ON ENVIRONMENTAL MANAGEMENT

Instructor: Staff.

GGR 1411 S (G) HUMAN RESPONSES TO NATURAL AND MAN-MADE ENVIRONMENTAL HAZARDS

Instructor: I. Burton.

GGR 1412 S (G) CONSERVATION STRATEGIES IN ENVIRONMENTAL AND RESOURCES MANAGEMENT

Instructor: A.P. Grima.

GGR 2334 (2) ENERGY, NATURAL RESOURCE AND ENVIRONMENTAL MANAGEMENT

The impact of human activity on environmental quality and resource depletion; evaluation of costs and benefits in management choices. The course is oriented to theory but examines public policy on a wide range of global, national, and local environmental/resources issues.

GGR 393 F (4)
GGR 1413 H (G)
GGR 1602 H (G) METHODS OF ENVIRONMENTAL IMPACT ASSESSMENT

Current methods of impact prediction and assessment in biophysical and socio-economic systems. Instructors: J. Whitney and V.W. Maclaren.

GGR 416 S (4)
GGR 1419 H (G)
GGR 1603 S (G) FIELD STUDIES IN ENVIRONMENTAL ASSESSMENT

The major emphasis of the course is on carrying out an environmental impact assessment. This assessment will be written, and defended in a mock hearing in class. The first component of the practical work will involve preparation of appropriate biophysical, economic, and social baseline data. The second component will centre around the prediction and evaluation of the impact of the proposal being studied. The practical work will be supplemented by a small number of workshops and lectures. Instructors: J. Whitney, V. Maclaren.

Master's Program in Planning

PLA 1005 H (G) DECISION ANALYSIS

PLA 1551 H (G) POLICY ANALYSIS AND IMPACT ASSESSMENT

This course introduces quantitative criteria from engineering and economics as tools in policy analysis. These include financial analyses, decision theory, cost-benefit, input-output, mathematical programming, etc., taught in such a way as to be applicable to planning problems. Instructors: J. Miron, A. Lea, M. Gerther.

PLA 1601 H (G) INTRODUCTION TO ENVIRONMENTAL PLANNING

This course introduces three approaches to environmental planning,

corresponding to the different scales of impact of a large resource and/or development project, for example, an oil sands project.

Department of Economics

ECO 313S (3) ENVIRONMENTAL ECONOMICS

Sources of air and water pollution, dispersion of pollutants, costs and benefits of pollution control. Examines current regulatory policies and alternatives to those policies. Particular attention is paid to problems of current interest, including acid rain and water-borne effluent from the pulp and paper industry.

INDIVIDUAL RESEARCH AND WORK:

Burton, I. GEOGRAPHY

Assessment of technological risks and environmental hazards.

Byer, P. INSTITUTE FOR ENVIRONMENTAL STUDIES

Risk assessment and public decisions; hazardous waste facility siting.

Dewees, D.N. ECONOMICS

Research on the differing economic impact of alternative policies for pollution control and their success in reducing environmental impacts; assessment of the risk to the general public and to occupants of buildings from the presence of asbestos.

Dooley, J.E. FACULTY OF MANAGEMENT STUDIES

EIA and risk assessment

Gibson, R.B. INNIS COLLEGE

(see entry — University of Waterloo)

Grima, A.P. INSTITUTE FOR ENVIRONMENTAL STUDIES/GEOGRAPHY

EIA in developing countries; institutional mechanisms in mitigating environmental impacts; role of public participation in EIA/SIA; environmental mediation.

Jones, P.H. INSTITUTE FOR ENVIRONMENTAL STUDIES

UNDP/WHO Project on Environmental Impact System, 1979-1981; EIA and corrective measures; UNDP/WHO Greece Project on physical planning in the environment including oil exploration, extraction, and transportation in the offshore areas of Greece and Crete, 1974-1982; project impact management.

Mackay, D. CHEMICAL ENGINEERING

Research on environmental behavior and effects of organic pollutants, especially hydrocarbons; technical advisor on oil spills in cold climates to Beaufort Sea Environmental Assessment Panel.

Maclaren, V.W. GEOGRAPHY

Decision-making and conflict resolution; environmental assessment of energy-from-waste facilities, evaluation methodologies.

Munn, R.E. INSTITUTE FOR ENVIRONMENTAL STUDIES

Research on EIA methods, air pollution; acid rain, optimization of environmental monitoring networks.

Regier, H.A. INSTITUTE FOR ENVIRONMENTAL STUDIES

Advisor to Electric Power Research (Palo Alto, California) on impacts of entrainment and impingement of fish in thermoelectric generating plants; recently completed 20-year study on the impact of the Bruce Nuclear Complex on local fish population.

Savan, B. INNIS COLLEGE

Development of simulation game on the environmental assessment process for the National Survival Institute; pre-submission for Ontario environmental assessments; co-director of the investigation by the Canadian Environmental Law Research Foundation into the application of Ontario's *Environmental Assessment Act*.

Wellman, B. CENTRE FOR URBAN AND COMMUNITY STUDIES

Network analysis; social impact assessment; technology assessment; project evaluation.

Whitney, J.B.R. GEOGRAPHY

Project «Ecoville»; environmental assessment procedur EIA and foreign aid; EIA in de ing coun-

tries; Chairman, Impact Assessment Panel, Joint Conference of Canadian and Chinese Geographers.

Whyte, A.V.

INSTITUTE FOR ENVIRONMENTAL STUDIES

Role of flood risk maps on local assessment of flood risk in Oshawa Area, perception of climatic risks in Canada, study into selected aspects of the emergency caused by the Mississauga train derailment (with I. Burton and P. Victor) for the Solicitor General of Ontario.

PROGRAM ACTIVITIES:

A. 1) *Institute for Environmental Studies*

The Institute is a centre for interdisciplinary research and study which offers association with a wide range of academics in the natural and social sciences. Its primary goal is to provide facilities and academic climate for problem-oriented research to those who wish to maintain their discipline-based academic work. The Institute specializes in research on: the quality of the environment, environmental toxicology, environmental and resource management, environmental impact assessment and risk assessment. Students of the Institute may work towards either a Master of Arts or a Master of Science.

2) *Master's Program in Planning*

The Program assists students in understanding the mandate, goals and instruments of planning agencies at all levels of the public sector, while providing the skills required for a professional career in one of several areas of planning specialization. Environmental assessment is approached from the direction of environmental planning.

3) *Department of Geography*

a) Environmental and Biophysical Systems — These branches of geography are concerned with description and analysis of the physical, chemical and biological processes that condition the environment, and with interactions between these processes and man (considered individually or socially). One option of study in this area is environmental assessment. Students concentrate on the measurement, analysis, conceptualization and understanding of biophysical and socio-economic systems to attempt to predict how each will change in response to new impacts.

b) Environmental Management and Environmental Assessment — These components of geography are highly eclectic. Students concentrating in this area take both physical and human geography courses, attempting to build an understanding of not only the physical and human approaches themselves, but also the many interactions between them.

4) *Innis College Environmental Studies Program*

Innis College provides a program at the undergraduate level in environmental studies. One of the topics addressed is environmental assessment.

B. EIA Core Program or Streaming?:

Yes. At the undergraduate level, the core program is offered in the Department of Geography. At the graduate level, the core program is offered in the Institute for Environmental Studies and the Master's Program in Planning.

C. Activities Related to EIA:

The Institute for Environmental Studies organizes workshops and seminars on topics related to EIA. Of note have been:

1) A workshop on risk management in Canada, 1981.

2) A major conference on risk assessment, October, 1982.

3) Project "Ecoville": a world-wide study of the impact of urbanization on the environment.

4) A workshop on New Directions in Environmental Impact Assessment: The Canadian Experience, October, 1983. Nineteen papers were presented on current approaches and new directions in EIA. The proceedings will be published.

ACTIVITÉS:

A. 1) *Institute for Environmental Studies*

L'Institut est un centre interdisciplinaire de recherche et d'études qui offre une gamme considérable de cours généraux en sciences naturelles et sociales. Il a pour but principal de fournir aux personnes qui désirent continuer de travailler dans leur discipline les ressources et le climat d'études nécessaires à la recherche orientée vers les problèmes. Il se spécialise dans la recherche sur la qualité de l'environnement, la toxicité environnementale, la gestion de l'environnement, l'évaluation des incidences environnementales et l'évaluation des risques. Les étudiants peuvent y obtenir une maîtrise ès Arts ou en Sciences.

2) *Master's Programme in Planning*

Le programme aide les étudiants à comprendre le mandat, les buts et les moyens d'action des organismes de planification à tous les niveaux du secteur public tout en leur permettant d'acquérir les aptitudes nécessaires pour exercer une profession dans l'un des domaines de spécialisation en planification. On y étudie l'évaluation des incidences environnementales du point de vue de la planification de l'environnement.

3) *Department of Geography*

a) Systèmes écologiques et biophysiques — Ces branches de la géographie traitent de la description et de l'analyse des processus physiques, chimiques et biologiques qui conditionnent l'environnement et des interactions de ces processus et de l'homme (du point de vue individuel ou social). Ce domaine d'étude comporte une option en évaluation environnementale. Les étudiants concentrent leurs efforts sur la mesure, l'analyse et la compréhension des systèmes biophysiques, socio-économiques et construits, afin d'essayer de prévoir de quelle façon chacun d'eux changera sous l'effet de nouveaux impacts.

b) Gestion de l'environnement et évaluation environnementale — Ces branches de la géographie sont très éclectiques. Les étudiants qui se spécialisent dans ce domaine suivent des cours de géographie physique et humaine pour essayer de comprendre non seulement les aspects physiques et humains mais aussi leurs nombreuses interactions.

4) *Innis College Environmental Studies Programme*

Le collège Innis offre aux étudiants non diplômés un programme d'études environnementales qui porte entre autres sur l'évaluation environnementale.

B. Programme spécifique aux évaluations environnementales?

Pour les étudiants non diplômés, le programme est offert au département de Géographie, et, pour les étudiants diplômés, à l'Institut d'études environnementales; il existe aussi, pour ces derniers, un programme de maîtrise en planification.

C. Activités se rapportant aux évaluations environnementales:

L'Institut d'études environnementales organise des ateliers et des séminaires sur des sujets se rapportant à l'évaluation environnementale. À signaler:

1) Un atelier sur le contrôle des risques au Canada, tenu en 1981.

2) Une importante conférence sur l'évaluation des risques, tenue en octobre 1982.

3) Projet Écoville: Une étude à l'échelle mondiale de l'effet de l'urbanisation sur l'environnement.

4) Un atelier sur les nouvelles directions en évaluation des impacts environnementaux; l'expérience canadienne, octobre 1983. Dix-neuf présentations sur les approches actuelles et les nouvelles directions de l'évaluation environnementale. On publiera les procès-verbaux.

TRENT UNIVERSITY

Location/Endroit: Peterborough, Ontario

Mailing Address/ Adresse: Trent University
Peterborough, Ontario
K9J 7B8

TEACHING:

Canadian Studies/Environmental and Resources Studies

CS 310 (3) PUBLIC POLICY AND THE CANADIAN ENVIRONMENT

Current issues in Canadian public policy relating to resource management, conservation, population and pollution control, approached in the context of world environmental and resource problems. Instructor: R.C. Paehlke.

Environmental and Resource Studies Program

ERS-HIS240 (2) CANADIAN RESOURCE DEVELOPMENT

An analysis of the evolution of the resource industries in Canada and their economic, political, social and environmental impacts. After historic introduction, the course will concentrate on energy resources since 1945 and the interaction between corporate initiatives, public policy, and government regulations. Instructor: R. Page.

ERS 300-301 (3) RESEARCH TOPICS

A research course in which small groups of students follow a specific project with a faculty member. Emphasis is on projects that involve some interaction between natural and social sciences such as environmental impact assessment. Instructor: Staff.

ERS-GEOG 333b (3) WILDERNESS RESOURCES

An examination of the history, use, planning and management of wilderness resources, with an emphasis on Canada, including environmental impact assessment procedures in national and provincial parks and wilderness areas. Instructor: J.S. Marsh.

ERS 340 (3) NORTHERN DEVELOPMENT: A CASE STUDY IN NORTHERN ENVIRONMENTAL IMPACT ASSESSMENT

This course looks at the biological, geotechnical, geophysical, social and economic components in the EIA of major northern projects (principally oil and gas). Instructor: R. Page.

ERS 403a/402b (4) CONCEPTS IN WATER POLLUTION

Issues and models relevant to an understanding of current problems in water pollution and impact assessment of aquatic environments.

ERS 410 (4) NORTHERN RESOURCE DEVELOPMENT AND THE ENVIRONMENT

An interdisciplinary study of the biological, geotechnical, social, economic and political aspects of northern mining, oil exploration, pipelines, LNG tankers, etc. and their relationship to the environment. Instructor: R. Page.

ERS 430 (4) ENVIRONMENTAL ETHICS

The ethical issues arising from the interaction of man and environment in man's day to day existence and in the creation of official or public policies. Instructor: L. Rubinoff.

INDIVIDUAL RESEARCH AND WORK:

Bowles, R.T. SOCIOLOGY

Social impact assessment in small communities; community level SIA; impact of major developments on families and households.

Evans, R.D. ENVIRONMENTAL AND RESOURCE STUDIES PROGRAM

Assessment of development impacts on chemical status of lakes.

Lockhart, A. SOCIOLOGY

Socio-economic impact model for northern development.

Marsh, J.S. GEOGRAPHY

Environmental impact assessment; history, planning and management

	of parks and wilderness resources; impacts of tourism, especially in alpine and northern areas.
Paehlke, R.	ENVIRONMENTAL AND RESOURCE STUDIES PROGRAM Conserver society; politics of resource development; EIA and energy planning; teaching of environmental studies; technology assessment; environmentalism and ideology; impact of science and technology on society.
Page, R.	ENVIRONMENTAL AND RESOURCE STUDIES PROGRAM Environmental assessment of energy development; northern development and assessment; energy policy; text on environmental and resource development in the 1970's.
Torgerson, D.	ADMINISTRATIVE AND POLICY STUDIES Social impact assessment; editor: *Alternatives*.
Whillans, T.H.	ENVIRONMENTAL AND RESOURCE STUDIES PROGRAM Aquatic ecology; fisheries; assessment of long-term environmental impacts; ecosystem rehabilitation.

PROGRAM ACTIVITIES:

A. 1) *Environmental and Resource Studies Program*

This is an interdisciplinary undergraduate program which includes formal instruction in EIA. It offers a pass and honours B.A. or B.Sc. degree (depending whether the emphasis is on biological or geographic subjects).

2) *Centre for Canadian Heritage and Development Studies*

Research support and M.A. program promoting interdisciplinary approaches to Canadian study topics. A major emphasis within the Centre is an interdisciplinary group which combines SIA and EIA as part of a broader analytic approach to northern and rural developmental and policy problems.

3) *Canadian Studies Program*

The Canadian Studies Program is not located in a single department, but rather it is a co-operative program offered among 12 departments at the undergraduate level. EIA is approached from a problem or issue-oriented direction.

4) *Northern Studies Committee*

The Committee of faculty members with interest in northern research, acts as a body to co-ordinate research activities, grant applications, teaching activities, and other matters pertaining to northern studies.

5) *Trent Aquatic Research Centre*

This interdisciplinary Research Centre undertakes contracts for clients in environmental research and impact assessment studies related to aquatic systems. Students are involved as technicians and researchers.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA:

1) Publication of *Alternatives*, a popular academic journal on environmental subjects.

2) Seminars and workshops for the public on environmentally related matters.

3) OPIRG — (Ontario Public Interest Research Group) A public action group active in promoting environmental education among the general public.

ACTIVITÉS:

A. 1) *Environmental and Resource Studies Program*

Il s'agit d'un programme interdisciplinaire pour les étudiants non diplômés qui comprend une formation régulière en évaluation environnementale et permet d'accéder au baccalauréat en arts ou en sciences selon que l'accent a été mis sur la biologie ou la géographie.

2) *Centre for Canadian Heritage and Development Studies*

Soutien de la recherche et programme de maîtrise ès arts favorisant l'étude interdisciplinaire des questions canadiennes. L'une des activités importantes du Centre est le travail d'un groupe interdisciplinaire qui intègre l'évaluation environnementale à une approche analytique générale de la mise en valeur du Nord et des régions rurales ainsi que de la problématique des politiques.

3) *Canadian Studies Program*

Programme conjoint réparti entre 12 départements mais dont aucun d'entre eux n'a l'unique responsabilité. Il est offert aux étudiants non diplômés et l'évaluation environnementale y est étudiée en rapport avec des problèmes ou des questions.

4) *Northern Studies Committee*

Formé de professeurs qui s'intéressent aux recherches nordiques, le comité coordonne les activités de recherche, les demandes de bourses, les activités d'enseignement et les autres questions qui se rapportent aux études nordiques.

5) *Trent Aquatic Research Centre*

Ce centre de recherche interdisciplinaire passe des contrats pour des clients en recherche environnementale et en études d'évaluation des impacts relatives aux systèmes aquatiques. Les étudiants participant en tant que techniciens et chercheurs.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluation environnementales:

1) Publication d'*Alternatives*, une revue d'éducation populaire sur l'environnement.

2) Séminaires et ateliers, à l'intention du public, sur des sujets se rapportant à l'environnement.

3) GRIPO — (groupe de recherche d'intérêt public de l'Ontario) — C'est un groupe d'action qui s'occupe de promouvoir l'éducation du grand public en matière d'environnement.

UNIVERSITY OF VICTORIA

Location/Endroit: Victoria, British Columbia

Mailing Address/ Adresse: The University of Victoria
P.O.Box 1700
Victoria, British Columbia
V8W 2Y2

TEACHING:

Department of Biology

GEO 556/ BIO 534/ ES 400 (4/G) ENVIRONMENTAL IMPACT ASSESSMENT

An introduction to the objectives, philosophy, concepts, methods and social implications of environmental impact assessment. Instructors: W.R.D. Sewell, D. Ellis.

Environmental Studies Program

ES 400 (4) THE POLICY PROCESS: ENVIRONMENT AND ENERGY

An examination of government decision-making as it relates to the environment. Instructor: D. Anderson.

Department of Geography

GEO 346 (3) COMMUNITY DEVELOPMENT AND PLANNING IN CANADA

The focus is on the manner in which spatial and technological developments have influenced the social and environmental balance of present communities. Instructor: J. Ransome.

GEO 350A (3) GEOGRAPHY OF RESOURCE MANAGEMENT

An introduction to the geographic study of natural resources; their form, inherent characteristics and external relations with the geography of the area in which they are found. Instructors: W. Ross, C. Wood.

GEO 350B (3) APPLIED RESOURCE GEOGRAPHY

Instructor: W. Ross.

GEO 450A (4) DECISION-MAKING IN RESOURCES MANAGEMENT: THEORY

Instructor: W.R.D. Sewell.

GEO 450B (4) DECISION-MAKING IN RESOURCES MANAGEMENT: PRACTICAL APPLICATIONS

Instructor: W.R.D. Sewell.

INDIVIDUAL RESEARCH AND WORK:

Bell, M. ENVIRONMENTAL STUDIES PROGRAM

Vegetation, wildlife and mining; vegetation inventory, mapping, interpretation, sensitivity analysis in conjunction with surface mine development.

Ellis, D.V. BIOLOGY

Research on marine environmental impact; ecological recovery; examination of assessment procedures.

Sewell, W.R.D. GEOGRAPHY

Water resources analysis; resources decision-making; assessment of Canadian policies in offshore development; new book on environmental impact assessment and government decision-making.

PROGRAM ACTIVITIES:

A. 1) *Department of Geography*

Environmental impact assessment is approached from the focus of resource management, and in particular, through issues concerned with water resources. Activity occurs both at the graduate and undergraduate level.

2) *Department of Biology*

The Department approaches the study of topics related to EIA/SIA primarily from marine environmental impact. A joint graduate course on EIA is offered by the Department of Biology and the Department of Geography.

3) *Environmental Studies Program*

The program comprises two approaches to environmental studies. The first, the conceptual approach, introduces students to a range of environmentally-related disciplines. The second approach is a topical approach, which focuses a selection of courses on a particular problem area. The program also includes an active examination of issues related to both EIA and SIA. Students are exposed to "real world" situations through a series of guest lectures and workshops on various subjects.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA: None indicated.

ACTIVITÉS:

A. 1) *Department of Geography*

On y étudie l'évaluation des incidences environnementales du point de vue de la gestion des ressources et, en particulier, des ressources en eau. On retrouve dans ce domaine des étudiants non diplômés et diplômés.

2) *Department of Biology*

On y étudie l'évaluation environnementale surtout du point de vue environnement marin. Les départements de biologie et de géographie offrent conjointement un cours en évaluation environnementale aux étudiants diplômés.

3) *Environmental Studies Program*

On y enseigne deux façons d'aborder l'étude de l'environnement: l'approche notionnelle, qui initie les étudiants à une variété de disciplines se rapportant à l'environnement, et l'approche par sujets, qui consiste en un choix de cours dans un domaine donné où se présentent des problèmes. Le programme comprend aussi une étude sérieuse des questions qui se rapportent aux évaluations environnementales? Les étudiants sont exposés à des situations réelles par une série de lectures et d'ateliers sur divers sujets.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales: Aucunes.

UNIVERSITY OF WATERLOO

Location/Endroit: Waterloo, Ontario

Mailing Address/ Adresse: The University of Waterloo
Waterloo, Ontario
N2L 3G1

TEACHING:

School of Urban and Regional Planning

PLAN 357 (3) CONSERVATION AND RESOURCE MANAGEMENT

Concepts related to ecological principles of resource management. Analysis, use and planning of renewable resources.

PLAN 430 (4) SOCIAL POLICY PLANNING

A reasoned systems approach to understand change and develop strategies for change through an integration of social goals, policy and programs.

ENV S 444 (4) MANAGEMENT OF LAND AND RESOURCES

Emphasis on techniques of inventory, critical evaluation and policy formulation related to sensible use of commodities. Attitudinal, legal and political influences are investigated particularly as they affect design and implementation of planning decisions.

ENV S 500 (4/G) PROFESSIONAL DEVELOPMENT IN ENVIRONMENTAL MANAGEMENT

Discussion of technical, procedural, economic and ethical issues related to professional practice.

PLAN 623 (G) SOCIAL CONCEPTS IN REGIONAL PLANNING

Examination of planners in their environment using systems, organization, changes and theories. Social concepts will be examined within a framework of social structure, looking at case studies and coming to some practical conclusions on how planners can and should use social concepts to enhance their efforts and accomplishments.

PLAN 626 (G) PLANNING, CITIZEN INVOLVEMENT AND SOCIAL CHANGE

Centred on the theory and practice of citizen involvement and social change in relation to planning and policy formulation, it includes the ideology of involvement, social change and intervention strategies, economics and social development, and new models of change based on degrees of centralization. There is an emphasis on Canadian case materials.

PLAN 662/ GEOG 662 (G) NATURAL RESOURCES PLANNING: POLICIES AND PROGRAMS

Natural resources and the planning process. Social, economic, political and legislative settings for natural resource planning: major areas of public controversy and conflict in natural resource use and development; international relations and the formulation of criteria for future resource planning policies. Instructor: J.G. Nelson.

PLAN 668/ GEOG 668 (G) ENVIRONMENTAL IMPACT ASSESSMENT

Techniques and technicalities covered in the first part of the course include legal aspects, teamwork, data collection and manipulation, public participation, and cost-benefit analysis. These topics are followed by case histories considered from the perspective of the proponent, public, consultant and government. Finally, the ethics and politics of environmental impact assessment are reviewed. Students are required to participate in a critique of an environmental assessment that is normally published in the School of Urban and Regional Planning Working Paper Series. Instructor: R. Suffling.

Department of Man-Environment Studies

MENV 241 (4) INTRODUCTION TO ENVIRONMENTAL/SOCIAL IMPACT ASSESSMENT

Introduction to means of assessing proposed approaches to environmentally and socially significant problems and opportunities. Special

emphasis on the nature and limitations of conventional means of assessing the impacts, and overall desirability, of technologies, projects, plans and policies. Close examination of case examples. Instructor: R. Gibson.

MENV 337 (3) ENVIRONMENTAL IMPACT ASSESSMENT

The course covers the theory and principles of EIA, surveys various methodologies, discusses the place of EIA in environmental planning in the Ontario Government, reviews case studies, looks at some of the larger issues surrounding EIA, and provides the student with an opportunity to do an actual EIA and take part in a mock hearing. Instructor: G. Michalenko.

MENV 338 (3) SOCIAL IMPACT ASSESSMENT

This course will provide an introduction to the background, theory and methodology of SIA. Students examine SIA as a type of social science research and as a key element in the continuing push for more informed and responsible decision-making in all sectors of society. Instructor: S. Lerner.

MENV 445 (4) IMPACT ASSESSMENT AND POLICY ANALYSIS: PRACTICUM

Students will draw on knowledge and experience gained in the prerequisite theme courses to critique and/or design impact analyses of a variety of "real world" activities, including policy initiatives, technological choices, environmentally relevant proposals, economic strategies and other of special interest or significance. Instructor: Staff.

Department of Geography

GEOG 319/ PLAN 319 (3) REGIONAL PLANNING TECHNIQUES

GEOG 356 (3) RESOURCE MANAGEMENT

Reviews selected theories, methods, and terminology related to economic, behavioral, institutional, and decision-making aspects of resource and environmental problems. Instructor: B. Mitchell.

INDIVIDUAL RESEARCH AND WORK:

Dorney, R.S. — SCHOOL OF URBAN AND REGIONAL PLANNING

Consulting to National Energy Board, Ontario Energy Board, Ontario Municipal Board, Environmental Assessment Board; environmental supervision of pipeline construction; urban ecosystems; ecological dimensions of environmental assessment; Ontario Society for Environmental Management seminars; waste management site selection; ecosystem rehabilitation.

Francis, G. — MAN-ENVIRONMENT STUDIES

Institutional arrangements for environmental management.

R.B. Gibson — MAN-ENVIRONMENT STUDIES

The implementation of Ontario's *Environmental Assessment Act*; problems of concept stage assessment (Beaufort Sea Hydrocarbon Production case); response to the deficiencies of EARP.

Hoffman, D. — SCHOOL OF URBAN AND REGIONAL PLANNING

The identification and mapping of environmentally sensitive areas in Lambton and Perth counties, Ontario; ecological basis for EIA; agricultural development in urban regions; the management of agricultural lands at Canada's margins.

Keith, R. — MAN-ENVIRONMENT STUDIES

Ecological and socio-economic impacts of northern petroleum and mineral development; regional planning in the north.

Lamb, L. — FACULTY OF ENVIRONMENTAL STUDIES

Strategies for the protection and management of rare species, relict and representative habitats and landforms; Ecological Advisory Council.

Lerner, S. — MAN-ENVIRONMENT STUDIES

Social impact assessment; designed and developed SIA course at University of Waterloo; social impacts of technological change; established network on "teaching and learning" impact assessment.

McLellan, A.	GEOGRAPHY	Preparation of EISs related to pit and quarry operations; land rehabilitation.
Michalenko, G.	MAN-ENVIRONMENT STUDIES	Social assessment; effect of resource development on native communities.
Mitchell, B.	GEOGRAPHY	Social and economic impacts; watershed management.
Mulamootil, G.	SCHOOL OF URBAN AND REGIONAL PLANNING	Consulting for the Ministry of Transportation and Communication on environmental impacts related to water resources; urban water quality.
Nelson, J.G.	FACULTY OF ENVIRONMENTAL STUDIES	Environmental and socio-economic impact assessment; northern oil and gas development and its assessment; assessment of pipeline corridors; environmentally significant areas; relations between assessment, planning and management.
Newkirk, R.T.	GEOGRAPHY	Urban and regional information systems: linkages between digital remote sensing and computer mapping.
Priddle, G.	MAN-ENVIRONMENT STUDIES	Socio-economic and ecological impacts, particularly for parks, protected areas, coastal zones.
Suffling, R.	SCHOOL OF URBAN AND REGIONAL PLANNING	EIA of resource development projects in Canada's mid-North (esp. forestry); utility corridor route planning; indices of ecological sensitivity to disturbance.
Wall, G.	GEOGRAPHY	Impacts of recreation and tourism.

PROGRAM ACTIVITIES:

A. *Faculty of Environmental Studies*

The Faculty includes the School of Architecture, the Department of Geography, the Department of Man-Environment Studies, and the School of Urban and Regional Planning. Certain Faculty members work throughout the Faculty. The Faculty concentrates on using diverse sources of knowledge from its different component disciplines to understand one particular problem area: the interaction of humans and their environments. Although each department has a particular academic focus, environmental and social assessment are areas of study in which all have common interests.

B. EIA Core Program or Streaming?:

Yes. With such an integrated approach to human-environment studies, the facilities and guidance are available to those students wishing to pursue a program of study and research in environmental and social impact assessment. (see also Department of Man-Environment Studies EIA "theme" concentrations). Graduate students in Urban and Regional Planning, and Geography, may undertake thesis research on EIA.

C. Activities Related to EIA:

Involvement in seminars, workshops and conferences related to EIA/SIA. Of note are:

1) Involvement in the Geographical Inter-University Resource Management Seminars (GIRMS).

2) Ontario Society for Environmental Management workshops held on campus.

3) Publications: *Environments*; Working Paper Series of the School of Urban and Regional Planning.

ACTIVITÉS:

A. *Faculty of Environmental Studies*

La faculté comprend l'école d'Architecture, le département de géographie, le département d'études de l'homme et de l'environnement ainsi que l'école de planification urbaine et régionale. Certains professeurs sont aussi appelés à enseigner dans toute la faculté. Cette dernière s'applique à utiliser les diverses sources de connaissances des différentes disciplines pour comprendre un problème en particulier: l'interaction de l'homme et de son environnement. Bien que, dans chaque département, l'enseignement soit axé sur une discipline particulière, l'évaluation des incidences environnementales et sociales est un sujet d'étude qui intéresse toute la faculté.

B. Programme spécifique aux évaluations environnementales?

Étant donné cette façon aussi intégrée d'aborder l'étude de l'homme et de l'environnement, les étudiants qui désirent suivre un programme d'études et de recherches en EIE ont à leur disposition les ressources et l'aide nécessaires. (Voir également les concentrations en évaluation des incidences environnementales et sociales du Department of Man-Environment Studies. Les étudiants diplômés en planification urbaine et régionale, et en géographie, peuvent entreprendre une thèse en évaluation environnementale.

C. Activités se rapportant aux évaluations environnementales:

Séminaires, ateliers et conférences se rapportant à l'EIE.

À signaler:

1) Participation aux séminaires géographiques inter-universités sur la gestion des ressources (GIRMS).

2) Les ateliers de l'*Ontario Society for Environmental Management* ont lieu à l'université.

3) Publications: *Environnements*; documents de travail de l'Ecole de planification urbaine et régionale.

THE UNIVERSITY OF WESTERN ONTARIO

Location/Endroit: London, Ontario

Mailing Address/ Adresse: The University of Western Ontario
London, Ontario
N6A 5C2

TEACHING:

Department of Geography

GEOG 135 (2/3) ENVIRONMENT, RESOURCES AND PLANNING

Study of human use of and impact on environment and resources, with emphasis on Canada: the interpretive model integrates ecology, strategies and institutional arrangements, perception and attitudes and technology. Instructor: S. Graham.

GEOG 235b. (2) INTRODUCTION TO RESOURCES MANAGEMENT

The application of an interpretive model which integrates ecology, strategies and institutional arrangements, perceptions, attitudes and values together with technology. Topics include environmental assessment, land classification and resources supply and demand forecasting. Instructors: R. Butler and M. Troughton.

GEOG 324 (3/4) LAND USE AND DEVELOPMENT ISSUES

Planning and development issues and techniques related to the practical planning process with particular emphasis on the role of the planner. Emphasis is on current issues in urban and regional development. Students are expected to participate at a level appropriate to a senior seminar. Instructor: H. Hossé.

GEOG 335 (3/4) RESOURCE EVALUATION AND ENVIRONMENTAL ASSESSMENT

Methods for resource evaluation in the context of environmental and social impact assessment and the determination of environmental quality. Goals and strategies for planned use and conservation of resources. Instructors: M. Troughton and R. Butler.

GEOG 337 (3/4) RECREATION GEOGRAPHY

Examination of leisure resources and related urban and rural land use problems; evolution, planning and the management of recreational demand and supply; the forecasting of future developments and their implications for both resource utilization and human communities. Instructor: R. Butler.

GEOG 350 (3/4) LOCATIONAL ISSUES IN PUBLIC AND PRIVATE SECTOR PLANNING

An exploration of the issues surrounding the choice of sites for a number of public and private sector activities, including retail and food services, public facilities, utility corridors. Site selection methods will be examined and applied in practical sessions. Instructor: M. Goodchild.

GEOG 535 (G) SEMINAR ON RESOURCE MANAGEMENT AND THE ENVIRONMENT

Conservation, planning and management of natural resources, landscapes and the environment. Problems of impact assessment, integrated planning and multiple use. Emphasis upon Canadian examples, strategies and managements. Instructor: R. Butler and M. Troughton.

GEOG 537 (G) SEMINAR ON RECREATION AND TOURISM RESOURCES

Analysis of resources utilized for leisure activities, and problems related to their planning and management. Identification and assessment of impacts resulting from recreation and tourism. Study of theories relating to the evolution, development and management of recreation and tourist areas. Instructor: R. Butler

GEOG 538 (G) RURAL RESEARCH SEMINAR

The seminar provides a forum for those interested in agriculture, rural and related branches of geography. Central themes include agricultural typology, rural planning and development, the rural-urban interface, countryside studies, and environmental and institutional impact studies. Instructor: M. Troughton.

King's College — Department of Sociology

SOC 151b (2/3) MACRO-URBANIZATION

Examines social impact assessment (SIA) as one part of environmental impact assessment. In particular, the course uses the steps of SIA to deal with industrialization in rural areas, urbanization, regionalization, and the formation of very large urban systems. Instructor: J.D. Flynn.

INDIVIDUAL RESEARCH AND WORK:

Butler, R.W. GEOGRAPHY

Recreation and tourism, impact assessment; identification and measurement of social, political and linguistic impacts of recreation and tourism; leisure patterns of population in remote locations; effects of energy problems on recreation and tourism; tourism as a process in landscape development; effects of energy developments on local communities; invited expert, Beaufort Sea Environmental Assessment.

Flynn, J.D. KING'S COLLEGE

Community impact assessment; preparing a summary report of SIA literature for the regional development sector of IIASA; United Church of Canada committee to monitor exemptions given under EIA legislation; energy policy.

Graham, D.S. GEOGRAPHY

Water resources engineering and planning, hydraulic and water quality modelling, and impact assessment.

Green, M.S. GEOGRAPHY

Northern development: applied network analysis and industrial location; socio-economic impact monitoring (of Norman Wells Oil Field Development and Pipeline Project.

Huron Erie Land Use Study (HELUS)

The objectives of this Group include environmental impact assessment. Several members have consulted on behalf of the group or have arranged seminars on aspects of EIA; environmental assessment for Ontario Hydro of 500 KV power transmission corridor from the Bruce Peninsula to London, Highway 401 and a transformer station in London.

King, R.H. GEOGRAPHY

Research interests include: soils and waste management; the persistence of chemical residues in contaminated soils; acid rain and its pedologic impact; soils as palaeoenvironmental indicators.

Troughton, M.J. GEOGRAPHY

Rural planning and development, including rural land use, settlement and services, environmental impacts, country-side and amenity studies, and the nature of the rural-urban fringe. Agricultural systems in developed countries, including part-time farming and the industrialization of agriculture.

Wightman, W.R. GEOGRAPHY

The social and economic processes impacting on the pattern of resource utilization, promoting the development of the rural landscape and changing the rural-urban balance in the community with special reference to Ontario in the nineteenth and early twentieth centuries.

PROGRAM ACTIVITIES:

A. *Honours Program in Geography (Resources Conservation)*

The Honours Geography (Resources Conservation) Program is designed to provide a specialized degree within geography in which the emphasis is placed on investigation of the nature and management of resources, primarily in a Canadian context, and which will fit the student either directly for a career in public or private concerns engaged in resource management, or for graduate work in resources and/or environmental studies.

B. EIA Core Program or Streaming?:

Students can stream with emphasis on EIA in the Resources Conservation Program, Department of Geography.

C. Activities Related to EIA:

1) Faculty Seminars, King's College: "The Construction of Multi-lane Highways in Ontario," J.D. Flynn, 1981.

2) Conference on "Impacts and Implications of New Legislation on Public Access to Private Land in Ontario," March, 1982, held jointly by Faculty of Law and the Department of Geography.

3) Faculty Seminar, King's College: "Regional Economic Growth or Regional Underdevelopment: the Construction of Nuclear Generating Stations," by J.D. Flynn, 1983.

4) Huron Erie Land Use Symposium, November 1983, "Municipal Solid Waste Disposal" (included session on Environmental Assessment Board).

5) Geographical Interuniversity Resources Management Seminar (GIRMS), March 1984, "Land Management and Environmental Effects in Northern Ontario."

6) Department of Geography: Public Lecture, A. MacDonald, University of Leeds, November 1983, "Environmental Impacts on Remote Communities."

7) Department of Geography: Public Lecture, G. Dickinson, University of Glasgow, "Problems of Tourist Development," November, 1983.

ACTIVITÉS:

A. *Honours Program in Geography (Resources Conservation)*

Ce programme vise à donner un degré spécialisé en géographie dans lequel on place l'emphase sur la définition de la nature et de la gestion des ressources, particulièrement dans un contexte canadien, et qui bénéficiera à l'étudiant soit pour une carrière dans une institution publique ou privée de gestion des ressources, soit pour poursuivre ses études en ressources et/ou en environnement.

B. Programme spécifique aux évaluations environnementales?

Les étudiants peuvent mettre l'emphase sur l'évaluation environnementale dans le programme de conservation des ressources, du département de géographie.

C. Activités se rapportant aux évaluations environnementales:

1) Séminaire de la faculté, au King's College. «The construction of Multi-Lane Highways in Ontario», par J.D. Flynn (1981).

2) Conférence tenue conjointement par la faculté de droit et le département de géographie, mars 1982, «Impacts and Implications of New Legislation on Public Access to Private Land in Ontario.»

3) Séminaire de la faculté du King's College. «Regional Economic Growth or Regional Underdevelopment: the Construction of Nuclear Generating Stations,» par J.D. Flynn (1983).

4) Colloque du «Huron Erie Land Use» intitulé «Municipal Solid Waste Disposal» (comprenait une session sur la commission d'évaluation environnementale) novembre 1983.

5) «Land Management and Environmental Effects in Northern Ontario,» séminaire du Geographical Inter-University Resource Management (GIRMS) mars 1984.

6) Conférence, département de géographie, «Environmental Impacts on Remote Communities,» par A. MacDonald, Université de Leeds, novembre 1983.

7) Conference, département de géographie, «Problems of Tourist Development,» par G. Dickinson, Université de Glasgow, novembre 1983.

WILFRID LAURIER UNIVERSITY

Location/Endroit: Waterloo, Ontario

Mailing Address: Wilfrid Laurier University
Adresse: Waterloo, Ontario
N2L 3C5

TEACHING:

Department of Geography

241/291-3 (2) GEOGRAPHY OF RESOURCE POLICY AND ADMINISTRATION

Focus upon the concepts and role of policy, planning and administration in Canadian resource management (includes EIA and SIA for specific policy fields). Instructor: G. Smith.

242/292-3 (2) RESOURCE MANAGEMENT IN THE GREAT LAKES BASIN

An analysis of current environmental issues and problems focusing on the Great Lakes Basin. Instructor: J. McMurry.

290-33 (2) PRINCIPLES OF RESOURCES MANAGEMENT

Specific concepts, methods and techniques of resource management practice in forestry, fisheries, water, air and land resources (includes EIA and SIA in some depth). Instructor: J. Hall.

342/392-3 (3) GEOGRAPHY OF WATER RESOURCES

Concepts and techniques of water basin management including benefit-cost analysis, public participation and social impact assessment. Instructor: G. Smith.

493-3 (4) PROBLEMS IN LAND RESOURCES MANAGEMENT

Seminar discussing the social, economic, ecological and political dimensions of land use conflicts and issues. Instructor: H. Parson.

651 (G) DECISION-MAKING, EVALUATION AND PUBLIC PARTICIPATION

Graduate seminar focusing on resource management decisions, public involvement and evaluation methodologies (including SIA and EIA). Instructor: G. Smith.

697 (G) HUMAN ECOLOGY OF STRESSED ENVIRONMENTS

Graduate research seminar focusing on natural resources, their development, the natural hazards and adverse environmental impacts associated with development. Instructors: K. Hewitt, J. Hall, G. Head, H. Whitney.

INDIVIDUAL RESEARCH AND WORK:

Smith, L.G. GEOGRAPHY

Institutional arrangements for electric power planning in Canada; public participation; an assessment of the Lancaster Sound Green Paper; northern land use planning; E.S.A. planning in southern Ontario.

PROGRAM ACTIVITIES:

A. *Department of Geography*

The Department of Geography at Wilfrid Laurier University provides a focused examination of issues concerning EIA and SIA. In addition, a course dealing specifically with impact assessment, "Impact Assessment in Resource Management," may soon be offered.

B. EIA Core Program or Streaming?:

Environmental and social impact assessment are at present, strong components of the University's focus on resource management, but they do not, as yet, represent a specific program or option of study in the Department of Geography.

C. Activities Related to EIA:

The Department of Geography actively participates in the organization and dissemination of information from the Geographical Interuniversity Resource Management Seminars (GIRMS), held jointly with the Universities of Guelph, Waterloo and Western Ontario. Many topics examined during the GIRMS meetings relate directly to EIA.

ACTIVITÉS:

A. *Department of Geography*

C'est au département de géographie de l'université Wilfrid Laurier que l'étude des questions se rapportant à l'évaluation environnementale est la plus au point. En outre, les professeurs du département ont mentionné qu'on offrira bientôt un cours portant spécialement sur l'évaluation des incidences et qui aura pour titre «*Impact Assessment in Resource Management.*»

B. Programme spécifique aux évaluations environnementales?

Actuellement, l'évaluation environnementale compte pour beaucoup dans l'intérêt que porte l'université à la gestion des ressources, mais elle ne fait pas encore l'objet d'un programme ou d'une option d'études au département de géographie.

C. Activité se rapportant aux évaluations environnementales:

Le département de Géographie participe activement aux séminaires géographiques inter-universités sur la gestion des ressources, qui sont tenus conjointement avec les universités de Guelph, Waterloo et Western Ontario et à la diffusion de l'information qui y est présentée. Un grand nombre de sujets étudiés lors de ces séminaires se rapportent directement à l'évaluation environnementale.

UNIVERSITY OF WINDSOR

Location/Endroit: Windsor, Ontario

Mailing Address/
Adresse: The University of Windsor
Windsor, Ontario
N9B 3P4

TEACHING:

Department of Geography

42.200 (2) INTRODUCTION TO RESOURCE MANAGEMENT

Basic concepts pertaining to natural resources, the impact of their use on the ecosystem, and the problems in their management. Emphasis will be placed on the growing demand for resources, the functional interaction between human society and its physical environment, and the spatial patterns of resource use and ecological impact. Instructor: I. Stebelsky.

42.333 (3) ENVIRONMENTAL DEGRADATION AND ITS CONTROL IN RESOURCE MANAGEMENT

The use and misuse of energy resources, minerals, wilderness areas, wildlife, air, water, and land. The analysis of resource management strategies for a more harmonious man-environment relationship in the future.

42.342 (3) URBAN AND REGIONAL PLANNING II — CONTEMPORARY ISSUES AND APPLIED ASPECTS

Various aspects of land use planning and urban development are analyzed, covering official plans, land severances, subdivision design, urban renewal, recreation needs, transportation systems, downtown development, shopping centres and industrial parks. Approximately one-third of the course deals with EIA/SIA. Students are required to carry out an environmental impact study for a proposed planning project.

42.360 (3) THE CANADIAN ARCTIC

An introduction to the geography and environment, history and present socio-economic conditions of Arctic Canada. The objective is to provide the necessary background for understanding current problems of indigenous peoples, resource development and exploitation and environmental management. Instructor: J. Jacobs.

42.459 (4) ENVIRONMENTAL ASSESSMENT OF AIR AND WATER RESOURCES

The analysis of man's effect on the atmosphere and hydrosphere in the Great Lakes region. Instructor: M. Sanderson.

Department of Biology

55-201 (1) APPLIED ECOLOGY

A survey of the biological impact of man and modern technology on our environment with a view to mitigating adverse effects. Topics include causes and effects of air and water pollution, the toxic and carcinogenic effects of chemicals in the environment, and the effects of disturbance on natural communities. Instructor: Staff.

Faculty of Engineering

86-522/
87-532/
99-522 (G) ENGINEERING AND THE ENVIRONMENT

Man and environment; evaluation of biosphere; ecological balances; pollution and environment; impacts of engineering activities on the environment — land, air, water, vegetation and other living beings; criteria, standards and goals; environmental factors to be considered in the engineering designs. Consideration and discussion of typical examples. Instructors: Staff.

INDIVIDUAL RESEARCH AND WORK:

Bewtra, J.K. CIVIL ENGINEERING

EIA and risk analysis of large industrial projects.

Blenman, M. GEOGRAPHY

Urbanization, transportation and social impact.

Jacobs, J. GEOGRAPHY

Climatic modification and assessment of man's impact on the environment.

LaValle, P.	GEOGRAPHY Assessment of human activities on water quality and shoreline processes.
Romsa, G.	GEOGRAPHY Assessment of urban activities and their impact on the environment.
St. Pierre, C.	CHEMICAL ENGINEERING EIA and risk analysis of large industrial projects.
Sanderson, M.	GEOGRAPHY Analysis of man's effects on the atmosphere and hydrosphere.
Stebelsky, I.	GEOGRAPHY Analysis of the effects of agricultural activities on the ecosystem in the Soviet Union.
Trenhaile, A.	GEOGRAPHY Assessment of human impact on shoreline erosion.

PROGRAM ACTIVITIES:

A. 1) *Department of Biology*

The Department of Biology offers an undergraduate honours program and a graduate program in population and environmental biology. It also works closely with the Great Lakes Institute — especially in matters pertaining to potentially toxic substances which may enter the ecosystem of the Great Lakes.

2) *Department of Geography*

The Department of Geography offers an honours program in resource management. The Department operates an Arctic School for students interested in studying topics related to the northern environment. In addition, students may do research as part of their study for the Department at the Great Lakes Institute.

3) *Great Lakes Institute*

The Great Lakes Institute is a newly formed research body whose principal responsibilities are to encourage the study of environmental problems in the Great Lakes ecosystem, to offer appropriate solutions and to foster public awareness of its findings. Researchers involved in work at the Institute are from the departments of biology, chemistry, civil and chemical engineering, economics, geography, geology, law and political science.

B. EIA Core Program or Streaming?: None indicated.

C. Activities Related to EIA:

The Department of Biology regularly sponsors seminars and public lectures on environmental and population biology.

ACTIVITÉS:

A. 1) *Department of Biology*

Ce département offre un programme spécialisé pour étudiants diplômés et non diplômés en biologie de la population et de l'environnement. Ils travaillent en étroite collaboration avec l'institut des grands lacs tout particulièrement en ce qui concerne les substances toxiques éventuelles qui peuvent entrer dans le système écologique des grands lacs.

2) *Department of Geography*

Ce département offre un programme spécialisé en gestion des ressources. Le département opère une école de l'arctique pour les étudiants interessés aux études nordiques. En plus, les étudiants peuvent faire de la recherche à l'institut des grands lacs.

3) *Great Lakes Institute*

L'institut des grands lacs est un centre de recherche nouvellement formé. Ses principales responsabilités sont d'encourager l'étude des problèmes environnementaux dans l'écosystème des grands lacs, d'offrir des solutions appropriées et de faire connaître ses résultats au public. Les chercheurs de l'institut proviennent des départements de biologie, chimie, génie civil et chimique, économie, géographie, géologie, droit et sciences politiques.

B. Programme spécifique aux évaluations environnementales? Aucun.

C. Activités se rapportant aux évaluations environnementales:

Le département de biologie parraine régulièrement des séminaires et conférences publiques sur la biologie de la population et de l'environnement.

YORK UNIVERSITY

Location/Endroit: Downsview, Ontario

Mailing Address/ Adresse: York University
4700 Keele St.
Downsview, Ontario
M3J 1P3

TEACHING:

Department of Sociology

(G) SOCIOLOGY OF NORTHERN DEVELOPMENT

An analysis of the impact of resource development projects on northern hinterland communities. Analysis based upon a theoretical model of socio-economic impact, and an accompanying methodology derived from the literature, and a completed socio-economic impact study of six northern communities. Instructor: B. Blishen.

Faculty of Environmental Studies

ES 6186 (G) ENVIRONMENTAL IMPACT ASSESSMENT

This seminar examines the theory and practice of environmental impact assessment. Both Canadian and American approaches to EIA are addressed with emphasis given to Ontario's legal and administrative requirements. The bulk of the course work focuses on the concepts, principles and methods of impact assessment and review. The course includes practical group exercises. Instructor: A. Armour.

ES 6187 (G) SOCIAL IMPACT ASSESSMENT

Introductory examination of Canadian and American legislative/administrative contexts of social impact assessment, its role in environmental impact assessment, basic procedures (profiling, projecting, assessing and evaluating), citizen participation, and the adequacy of and alternatives to social impact assessment. Instructor: A. Armour.

ES 6481 (G) IMPACT ASSESSMENT WORKSHOP

This course focuses on the application of methods and techniques for environmental assessment, including social impact assessment. Instructor: A. Armour.

ES 6131 (G) ENVIRONMENTAL CONSIDERATIONS IN SETTLEMENT PLANNING

This course focuses on planning approaches to promote environmental protection, including policy development, impact assessment, development controls, etc. Instructor. A. Armour.

Osgoode Hall Law School

(3) ENVIRONMENTAL PROTECTION LAW

Examines various aspects of environmental law, including EIA and the law. Instructor: D.P. Emond.

(3) RESOURCES DEVELOPMENT LAW

A portion of the course examines the federal Environmental Assessment and Review Process (EARP). Instructor: D.P. Emond.

(3) ENERGY LAW

Instructor: P.C. Cumming.

INDIVIDUAL RESEARCH AND WORK:

Armour, A. FACULTY OF ENVIRONMENTAL STUDIES

Energy conservation through land use planning; community energy profiling; social/environmental impact assessment; environmental planning.

Allin, J. OSGOODE HALL LAW SCHOOL

Public participation under the Ontario *Environmental Assessment Act* and New Zealand Legislation (LL.M. research).

Blishen, B. SOCIOLOGY

Socio-economic impact modelling; consultant to Department of Indian Affairs and Northern Development on socio-economic modelling; seminars on socio-economic impact modelling in Ottawa, Vancouver.

Craig, D. OSGOODE HALL LAW SCHOOL

Public participation and environmental and social impact assessment (LL.M. research).

Emond, D.P.	OSGOODE HALL LAW SCHOOL	Revising text *Environmental Assessment Law in Canada*; land use planning and environmental assessment; fairness and natural justice in environmental assessment hearings.
Homenuck, P.	FACULTY OF ENVIRONMENTAL STUDIES	Social planning; SIA; Canadian native issues; land use planning; public participation.
Lang, R.	FACULTY OF ENVIRONMENTAL STUDIES	Environmental impact assessment; land use planning; energy conservation through land use planning; community energy profiling; environmental planning.
Stevenson, C.	OSGOODE HALL LAW SCHOOL	Problems of evidence proof and argument in environmental decision-making processes.

PROGRAM ACTIVITIES:

A. 1) *Faculty of Environmental Studies*

The Faculty provides a program of teaching and research at the graduate level. Students and faculty members pursue various aspects of man-environment interaction in their research. Although there is no EIA/SIA program *per se*, students may pursue a research path in this area drawing from the various areas covered by faculty members.

a) Joint Law-Environmental Studies Program: This program allows students to marry interests in the study of law and environmental issues. Students examine the need to protect environmental conditions in the many areas of human activity, and the many controls available through jurisprudence.

b) Administrative and Environmental Studies Program: The program integrates concerns and skills required for careers in management and administration in the private and public sectors with an emphasis on environmental matters. This area of study results from the fact that major organizations are being forced to deal with environmental concerns in their day to day operations.

2) *Department of Sociology*

The social impact of development projects is under study by members of the department. Of special interest is the analysis of the impact of resource development projects on northern hinterland communities. The department maintains close ties with the Faculty of Environmental Studies.

3) *Osgoode Hall Law School*

The teaching and research of subjects related to EIA/SIA undertaken by members of the Law School focuses on two main areas. The first area relates to resources development and those parts of the legal process that are concerned with this. The second is the hearing process; in particular, an examination of whether or not the principles of fairness and natural justice are adequate in the various EIA processes.

B. EIA Core Program or Streaming?:

The Faculty of Environmental Studies provides a program of teaching and research at the graduate level. The Faculty's approach to graduate education emphasizes self-directed learning. There is no core curriculum or mandatory set of courses. Students pursue individualized programs of study focused on their own specific learning objectives, career motivations and interests. Although there is no EIA/SIA program *per se*, students may pursue a research path in this area drawing from the resources provided by the Faculty as well as those available in other faculties at York and, where necessary, at other universities.

C. Activities Related to EIA:

The Faculty of Environmental Studies offers seminars and workshops on topics related to EIA/SIA for the general public and for those in the private and public sectors. Of note are:

1) "A Guide to Commenting on Environmental Impact Assessments," November, 1981;

2) "Social Impact Assessment and Monitoring," May, 1982;

3) "Predicting and Assessing the Impact of Public Projects," Fall, 1982.

4) "The Not-In-My-Backyard Syndrome. Public Involvement in Hazardous Waste Facility Siting," May, 1983. (Proceedings available.)

ACTIVITÉS:

A. 1) *Faculty of Environmental Studies*

La faculté offre un programme d'enseignement et de recherche pour les étudiants diplômés. Au cours de leurs recherches, étudiants et professeurs étudient divers aspects de l'interaction de l'homme et de l'environnement. Bien qu'il n'existe pas de véritable programme d'études en évaluation environnementale et sociale, les étudiants peuvent poursuivre des recherches sur le sujet en puisant dans les divers domaines d'enseignement des professeurs.

a) *Joint Law — Environmental Studies Program* — Offert aux étudiants intéressés par le droit et par les questions environnementales. On y étudie la nécessité de protéger l'environnement dans les nombreux domaines de l'activité humaine ainsi que les nombreux contrôles à cet effet auxquels il est possible de recourir par la jurisprudence.

b) *Administrative and Environmental Studies Program* — Le programme intègre les aptitudes à régler les problèmes et les connaissances nécessaires aux étudiants qui se destinent à une carrière en gestion et en administration dans le secteur privé et public; on y met l'accent sur les questions environnementales. Ce domaine d'études a été créé parce que les organisations importantes doivent régler des problèmes qui se rapportent à l'environnement au cours de leurs opérations journalières.

2) Department of Sociology

L'impact social des projets d'exploitation est à l'étude par le département. On s'intéresse particulièrement à l'analyse de l'impact des projets d'exploitation des ressources sur les collectivités nordiques de l'arrière-pays. Le département entretient des rapports étroits avec la faculté d'études environnementales.

3) Osgoode Hall Law School

L'enseignement et la recherche en EIES portent sur deux principaux domaines: l'exploitation des ressources et son aspect juridique, et le processus actuel des audiences lui-même. On s'interroge en particulier sur les principes d'équité et de justice naturelle dans les divers processus d'évaluation environnementale.

B. Programme spécifique aux évaluations environnementales?

La Faculty of Environmental Studies offre un programme d'enseignement et de recherche pour étudiants diplômés. La faculté met l'accent sur les programmes d'études individuels. Il n'y a pas de programme approfondi ni de cours obligatoire. Les étudiants poursuivent des programmes d'études individuels qui portent sur leurs propres aspirations en ce qui concerne leurs études, leurs carrières et leurs intérêts. Bien qu'il n'existe pas d'orientation en évaluation environnementale en tant que telle, les étudiants peuvent puiser à même les ressources de la faculté ainsi que celles d'autres facultés à York, et, si nécessaire, d'autres universités pour effectuer leur recherche dans ce domaine.

C. Activités se rapportant aux évaluations environnementales:

La Faculty of Environmental Studies présente, à l'intention du grand public et des personnes qui travaillent dans le secteur privé et public, des séminaires et des ateliers sur des sujets qui se rapportent aux évaluations environnementales. À signaler:

1) «A Guide to Commenting on Environmental Impact Assessments» (novembre 1981);

2) «Social Impact Assessment and Monitoring», (mai 1982);

3) «Predicting and Assessing the Impact of Public Projects» (automne 1982).

4) «The Not-In-My-Backyard Syndrome. Public Involvement in Hazardous Waste Facility Siting,» (mai 1983).

BIBLIOGRAPHIC SUBMISSIONS / BIBLIOGRAPHIES PRÉSENTÉES

To advance the state of the art in EIA it is necessary not only to improve the contact network between researchers, but also important to make known the written material that is available on the subject. This bibliography was drawn from material submitted to us during our surveys and is updated annually. It is not meant to be a definitive listing of every publication on EIA, but rather an accurate listing of what has been recently written and is available.

Si l'on désire perfectionner les règles de l'art dans le domaine des évaluations d'impacts environnementaux, il ne suffit pas d'améliorer le réseau de communications entre chercheurs mais il faut encore faire connaître les ouvrages traitant de ces sujets. Cette bibliographie, qui est mise à jour annuellement, provient du matériel qui nous a été soumis durant notre recherche. L'intention n'est pas de donner une liste définitive de tous les ouvrages concernant le sujet mais plutôt d'avoir une liste fidèle de ce qui a été écrit récemment et est disponible.

Abele, F. (1982)
"A Framework for Mutual Benefit: Social and Political Research in the North." *Proceedings of the Fourth Northern Population Workshop, Committee on Northern Population Studies*, Frobisher Bay, Aug. 30 — Sept. 1, 1982, (Calgary).

Aitken, A.E. (1982)
Biophysical Processes on the Intertidal Flats of Pangnirtung Fiord, Baffin Island, N.W.T. M.Sc. Thesis. Kingston: Queen's University, Department of Geography, 229 pp., (Queen's).

Aitken, A.E. and R. Gilbert (1981)
Biophysical Processes on Intertidal Flats of Pangnirtung Fiord, Baffin Island, N.W.T. Final Report of Research to Petro-Canada. Kingston: Queen's University, Department of Geography, 92 pp., (Queen's).

Andressen, B. (1982)
Social Impact Assessment and Planning, Canmore and the Winter Olympics. Master of Arts Thesis. Waterloo: University of Waterloo, School of Urban and Regional Planning, (Waterloo).

Archibold, W. (1981)
"Use of Mass Bags to Monitor Heavy Metal Deposition around Pt. Kemble Industrial Complex in New South Wales." Paper presented at the *Meeting of the Canadian Association of Geographers*, Cornerbrook, (Saskatchewan).

Armour, A. (1979)
"Current Methods in Environmental Impact Assessment." Presentation to one-day workshop on *Issues in EIA*, York University, Faculty of Environmental Studies, November, 1979, (York).

Armour, A. (1979)
Information Resources for Environmental Impact Assessment. Downsview: York University, Faculty of Environmental Studies, 146 pp. (York).

Armour, A. (1981)
"The Issue of Adequacy in EIA." Presentation to one-day workshop on *A Guide to Commenting on Environmental Impact Assessments*, York University, Faculty of Environmental Studies, November, 1981, (York).

Armour, A. (ed.) (1981)
Issues in Environmental Impact Assessment. Downsview: York University, Faculty of Environmental Studies, (York).

Babin, R. et J.-G. Vaillancourt (1982)
"Le mouvement écologiste et anti-nucléaire face aux governements: le cas du débat public sur l'énergie au Québec et au Canada." Communication présentée au *2e Colloque sur la réforme et le changement en administration* publique à Montréal et publiée dans J.-G. Vaillancourt, (ed.), *Mouvement écologiste, énergie et environnement: essais d'écosociologie*. Montréal: Editions Coopératives Albert Saint-Martin, p. 109-124, (Montréal).

Baker, B.L. (1980)
Benefiting from Environmental Monitoring. Kananaskis Centre report 1980-14, Calgary: University of Calgary, Kananaskis Centre for Environmental Research, 13 pp. (Queen's).

Baker, D. (1981)
Ecological Systems Analysis in Environmental Planning and Management with Emphasis on the Validation of Models. Master's Thesis. Waterloo: University of Waterloo, (Waterloo).

Baker, D. (1982)
The Alaska Native Claims Settlement. Kingston: Queen's University, Eastern Arctic Study, Institute of Local Government, 100 pp., (Queen's)

Barker, M.L. (1983)
Developing Summer Recreation Potential in the Whistler Corridor. Natural Resources Management Program Discussion Paper No. 1. Burnaby: Simon Fraser University, 54 pp., (Simon Fraser).

Beanlands, G.E. (1981)
"Environmental Impact Assessment: A Concept at the Crossroads." Presentation to the *Conference on the Assessment of Environmental Impact*, sponsored by EXXON Corp., New York, December 2, 1981, 41 pp., (Dalhousie).

Beanlands, G.E. and P.N. Duinker (1981)
The Ecological Basis for Environmental Impact Assessment in Canada — Progress Report. Halifax: Dalhousie University, Institute for Resource and Environmental Studies, 110 pp., (Dalhousie).

Beanlands, G.E. and P.N. Duinker (1982)
"Lessons from Ten Years of Offshore Impact Assessment." A paper presented to *West Coast Offshore Oil and Gas: Expectations and Opportunities*, 28-30 Nov. 1982, Vancouver, B.C., 28 pp., (Dalhousie and New Brunswick).

Beanlands, G.E. and P.N. Duinker (1982)
"Science and the Administration of Environmental Impact Assessment in Canada." A paper presented at *Environmental Concerns of the 80's: Environmental Government Affairs Seminar*, sponsored by Air Pollution Control Association, and Federation of Associations on the Canadian Environment, Ottawa, October, 1982, 8 pp., (Dalhousie and New Brunswick).

Beanlands, G.E. and P.N. Duinker (1983)
Framework for an Ecological Environmental Impact Assessment in Canada. Final Report. Halifax: Dalhousie University, Institute for Resource and Environmental Studies; and Hull, Quebec: Federal Environmental Assessment Review Office, 133 pp., (Dalhousie).

Beanlands, G.E. et P.N. Duinker (1983)
Un cadre écologique pour l'évaluation environnementale au Canada. Halifax: Dalhousie, Institute for Resource and Environmental Studies; et Hull, Québec: Bureau fédéral d'examen des évaluations environnementales, 144 pp., (Dalhousie).

Beanlands, G.E. and P.N. Duinker (in preparation)
"Environmental Impact Assessment in the Offshore: Lessons from a Decade of Experience," *Offshore Management*, (Dalhousie and New Brunswick).

Berkes, F. (1981)
"Some Environmental and Social Impacts of the James Bay Hydroelectric Project, Canada," *Journal of Environmental Management*, 12: pp. 157-172, (Brock).

Berkes, F. (in preparation)
"Preliminary Impacts of the James Bay Hydroelectric Project, Quebec, on Estuarine Fish Populations," *Arctic*, (Brock).

Bird, C.R. (in preparation)
Planning and Managing Northern Hydroelectric EIA's. Master of Arts Thesis. Waterloo: University of Waterloo, School of Urban and Regional Planning, (Waterloo).

Blishen, B., A. Lockhart, *et al.* (1979)
A Socio-Economic Impact Model for Northern Development. Ottawa: Department of Indian and Northern Affairs, 2 volumes, (York).

Blythe, J.M. (1983)
Moose River, an Unorganized Community in Northeastern Ontario: A Preliminary Report. Hamilton: McMaster University, Technology Assessment in Subarctic Ontario, Report Number 12, (McMaster).

Bone, R. and J. Pomeroy. (1982)
"Socio-Demographic Field Surveying for the Norman Wells Database Study," Paper presented to the *Northern Population Workshop IV*, Frobisher Bay, August 1982, (Saskatchewan).

Bone, R.M. and M.B. Green (in preparation)
"The Northern Native Labour Force: A Disadvantaged Work Force," in *Operational Geographer*.

Bonn, F. *et al.* (1982)
"The Use of Landsat in Monitoring Resource Development in Canada" in P.J. Howarth *et al.*, *Landsat for Monitoring the Changing Geography of Canada*. Ottawa: Centre canadien de télédétection, pp. 65-84.

Boothroyd, P.D. (1979)
Review of Alberta's Social Impact Assessment Reports. Edmonton: Alberta Environment, (British Columbia).

Boothroyd, P.D. (1980)
Impact Assessment Issues in the United States. Edmonton: Alberta Environment, (British Columbia).

Boothroyd, P.D. (1980)
Issues in Socio-economic Impact Assessment. Edmonton: Alberta Environment, (British Columbia).

Boothroyd, P.D. (1982)
Implications of Year-round Shipping through the Northwest Passage. Ottawa: Canadian Arctic Resources Committee (with W. Rees), (British Columbia).

Boothroyd, P.D. (1982)
Review of the Steering Committee Approach for Impact Management. Edmonton: Alberta Environment, (British Columbia).

Boothroyd, P.D. (1982)
"Overview of Issues," in *Proceedings of the First National Conference on Social Impact Assessment*, (in press), (British Columbia).

Boothroyd, P.D. (1982)
The Keephills Experience: Case Study of an Environmental Impact Assessment. Edmonton: Alberta Environment, (British Columbia).

Boothroyd, P.D. and W.E. Rees (1984)
"Impact Assessment From Pseudoscience to Planning Process: An Educational Response," *Impact Assessment Bulletin*, (British Columbia).

Bowden, M.A. (1981)
Exemptions within the Ontario Environmental Assessment Act, 1975, LL.M. Thesis. Toronto: York University, School of Law, (Saskatchewan).

Bowden, M.A. (1983)
"E.I.A. and Mineral Development," in Bartlett, R. (ed.), *Mining Law in Canada*. Law Society of Saskatchewan, (Saskatchewan).

Bowles, Roy T. (1981)
Social Impact Assessment in Small Communities. Toronto: Butterworths. (Trent).

Bowles, Roy T., (ed.) (1982)
Little Communities and Big Industries: Studies in the Social Impact of Canadian Resource Extraction. Scarborough, Ont.: Butterworths. (Trent).

Brizinski, P.M. (1983)
A Survey of Social Impact Assessment: Theory and Practice. Hamilton: McMaster University, Technology Assessment in Subarctic Ontario (McMaster).
Vol. I — *Public Policy and the SIA Process* (Report #7)
Vol. II — *Baseline Profiting* (Report #8)
Vol. III — *Projection, Assessment, and Evaluation* (Report #9)
Vol. IV — *Social Impact Assessment in the Canadian Northlands: An Introductory Appraisal* (Report #10)
Vol. V — *Bibliography* (Report #11)

Brown, S. (1981)
Eastern Arctic Study Bibliography Listings as of June 1, 1981. Kingston: Queen's University, Eastern Arctic Study, Institute of Local Government, 70 pp., (Queen's).

Burton, I., R. McCullough, D. Fowle and R.E. Munn (1982)
Living with Risk: Environmental Risk Management in Canada. Toronto: University of Toronto, Institute for Environmental Studies, (Toronto).

Butler, R.W. (1979)
"The Social Impact of Tourism and Recreation," in E. Avedon, M. Le Lievre and T. Stewart, (eds.), *Contemporary Leisure Research*. Toronto: Ontario Research Council on Leisure, pp. 371-378, (Western Ontario).

Butler, R.W. (1980)
"The Concept of a Tourist Area Cycle of Evolution and Implications for Management of Resources," in *Canadian Geographer*, Vol. 24, No. 1, pp. 5-12, (Western Ontario).

Butler, R.W. (1982)
"Assessing the Impacts of Leisure Activities of Oil Industry Employees upon Local Communities," in Proceedings: *International Conference on Oil and the Environment*, Part A, pp. 73-80, (Western Ontario).

Butler, R.W. (in preparation)
"The Implications of Offshore Oil and Gas Development," in P.J. Ricketts, (ed.), *Coastal Studies in Canadian Geography*, Number 2. Halifax: Saint Mary's University, (Western Ontario).

Byer, P. (1979)
"Screening Objectives and Uncertainties in Water Resources Management," *Water Resources Research*, Vol. 15, No. 4, pp. 768-774, (Toronto).

Byer, P. and J. Dooley (1982)
"Decision Analysis for Risk Management," in I. Burton and R. McCullough, (eds.), *Living with Risk: Environmental Risk Management in Canada*. Toronto: University of Toronto, Institute for Environmental Studies, (Toronto).

Carley, M. (1982)
"Lessons for Impact Monitoring," in *Impact Assessment Bulletin*, Vol. 1, pp. 76-99, (British Columbia).

Carley, M. (1983)
"SIA: A Review of Selected Methods" and "A Decade of Social Indicator Research: Any Lessons for SIA?", in K. Finsterbusch, C.P. Wolf and L. Llewellyn (eds.), *Methods of Social Impact Assessment*. Los Angeles: Sage Publications, (British Columbia).

Carley, M. (1983)
"Socio-economic Monitoring for the Beaufort Region." A presentation to the Beaufort Sea Environmental Assessment Panel. Vancouver: School of Community and Regional Planning, University of British Columbia, (British Columbia).

Carley, M. (1984)
Cumulative Socio-economic Monitoring: Issues and Indicators for the Beaufort Region. Yellowknife: Government of the Northwest Territories; and Ottawa: Department of Indian Affairs and Northern Development, March, 1984. (British Columbia).

Carley, M. and E. Bustelo (1984)
Social Impact Assessment and Monitoring: A Cross Disciplinary Guide to the Literature. Boulder: Westview Press, (British Columbia).

Carrière, J. (s.d.)
Étude d'impact des lignes de transport énergétique sur l'évaluation foncière en milieu villégiature, Hydro-Québec, Direction environnement (UQAM).

Chabot, C. (1981)
Effets des pluies acides sur les écosystèmes forestiers. Impact sur les peuplements d'épinettes au Québec. Essai de maîtrise en environnement. Sherbrooke: Université de Sherbrooke (Sherbrooke).

Christian, A.J. (1981)
"The Impact of Offshore Oil Production on the Construction Industry in Sparsely Populated Areas." A paper presented to the *3rd International Symposium on Organization and Management of Construction*, Dublin, June 1981, (Memorial).

Christian, A.J. (1981)
An Introduction to the Impact of the Development and Production of Offshore Oil and Gas on the Newfoundland and Labrador Construction Industry. EAST Report, Paper No. 1. St. John's: Memorial University of Newfoundland, Faculty of Engineering and Applied Science, (Memorial).

Christian, A.J. (1982)
Construction Management, Construction Techniques and Other Related Impacts of Offshore Oil and Gas Developments. Paper No. 2, EAST report St. John's: Memorial University of Newfoundland, Faculty of Engineering and Applied Science, (Memorial).

Clagg, J.G. and H.F. Campbell (1980)
"Alternative Policies Towards Frontier Mining Projects with Adverse Social Consequences," *Journal of Business Administration*, Vol. III, No. 1 and 2, Chapter 16, (British Columbia).

Coffey, W.J. (1981)
"Intra-Regional Disparities in Canada's Maritime Provinces." A paper presented to the *Annual Meeting of the Canadian Association of Geographers*, Cornerbrook, August, 1981 (with A.S. Harvey and W.S. Macdonald), (Dalhousie).

Comtois, Y. and L. Potvin (1979)
Analyse et évaluation d'une action. Cas pratique: Projet d'extension du port de Québec sur les battures de Beauport. Rapport scientifique No. 109. Québec: INRS-Eau, Université du Québec, 170 p., (INRS-Eau).

Conway, C. (1982)
An End Use Energy Demand Model: Development and Policy Analysis Applications. Master of Environmental Studies. Toronto: York University, (York).

Couch, W.J., J.F. Herity, and R.E. Munn (1983)
"Environmental Impact Assessment in Canada" in *NATO Advanced Study Institute on Environmental Impact Assessment*. The Hague: M. Nijhoff, Pubs.; also Occasional Paper, No. 6, Federal Environmental Assessment Review Office, Hull Quebec, 1981. (Toronto).

Craig, F. and F. Tester (1982)
"Indigenous Peoples: Reassuring Directions for SIA," in C. Geisler *et al.* (ed.), *Indian SIA: The Social Impact Assessment of Rapid Resource Development on Native People*. Ann Arbor: University of Michigan, Natural Resources Social Research Laboratory, (Calgary).

Cross, S.F. and D.V. Ellis (1981)
"Environmental Recovery in a Marine Ecosystem Impacted by a Sulfite Process Pulp Mill," *Journal of Water Pollution Control Federation*, Vol. 53, pp. 1339-1346, (Victoria).

Crowder, A.A. (1982)
"Impact Indices Based on Introduced Plant Species and Letter: A Study of Paths in St. Lawrence Islands National Park, Ontario, Canada," *Environmental Management*, (Queen's).

Curtis, F.A. (1981)
"Environmental Assessment in Ontario, Canada," *Journal of the Urban Planning and Development Division, American Society of Civil Engineers*, Vol. 107, No. UPI, pp. 1-17, (Regina).

Curtis, F.A. (1982)
"A Checklist for the Writing and Presentation of Environmental Assessment (EA) Reports," *The Canadian Geographer*, Vol. 26, No. 1, (Regina).

Curtis, F.A. (1983)
"An Environmental Assessment Procedure for Shopping Centres," *Urban Ecology*, Vol. 7, (Regina).

Curtis, F.A. (1983)
"Environmental Assessment of Campeau Shopping Center," *Journal of Urban Planning and Development*, Vol. 109, No. 2, (Regina).

Curtis, F.A. (in preparation)
"Environmental Assessment for Local Private Projects," *Environments*, Vol. 15, No. 1, (Regina).

Curtis, F.A. (in preparation)
"Integrating Environmental Mediation into EIA." *Impact Assessment Bulletin*, (Regina).

Curtis, F.A. and I. Silkalns (1979)
Issues in Environmental Assessment: Public Participation in EA Preparation. Prepared for the Ontario Ministry of the Environment. Kingston: Queen's University, School of Urban and Regional Planning, 17 pp., (Regina).

Curtis, F.A. and J. Amos (1979)
Issues in Environmental Assessment: EA Information Sources. Prepared for the Ontario Ministry of the Environment. Kingston: Queen's University, School of Urban and Regional Planning, 27 pp., (Regina).

Curtis, F.A. and M.A. Bowden (in preparation)
Environmental Impact Assessment. Edmonton: Athabasca University Press, (Regina and Saskatchewan).

Curtis, F.A. and R. Pringle (1979)
Issues in Environmental Assessment: Project Alternatives Identification and Evaluation. Prepared for the Ontario Ministry of the Environment. Kingston: Queen's University, School of Urban and Regional Planning, 100 pp., (Regina).

Daborn, G.R. (1984)
"Environmental Considerations of Tidal Power," in M.W. Conley, and G.R. Daborn (eds.), *Energy Options for Atlantic Canada*. Halifax: Lorimer Press, (Acadia).

Daborn, G.R., G.C. Baker and M.J. Dadswell (1983)
"Environmental Consequences and Ameliorative Measures of the Annapolis Tidal Power Project," *Water Science Technology*, 16: 297-299, (Acadia).

Daviault, P. (1982)
Evaluation des impacts associés à l'épandage aérien de phytocodes granulaires. Essai de maîtrise en environnement. Sherbrooke: Université de Sherbrooke, (Sherbrooke).

Davidson, M. (1981)
Policy and Decision-making in the North: The Case of Lancaster Sound, Vancouver: School of Community and Regional Planning, University of British Columbia, (British Columbia).

De'Ath, C. (1980)
"High Technology and Original Peoples: The Case of Deforestation in Papua New Guinea and Canada," *Impact of Science on Society*, Vol. 30, No. 3: 12, (Waterloo).

De'Ath, C.E. (1980)
The Throwaway People: Social Impact of the Gogal Timber Project Madang Province, Papua New Guinea. Borako, Papua New Guinea: Institute of Applied Social and Economic Research, 131 pp., (Waterloo).

De'Ath, C.E. (1982)
Social Impact Assessment: A Critical Tool in Land Development Planning? New York: International Social Science Journal (UNESCO), September, 16 pp., (Waterloo).

De'Ath, C. (in preparation)
Touching the People: Socio-historical Impact of a Changing Resource Base, Manus Province, (Admiralty Islands), Papua New Guinea. 192 pp., (Waterloo).

Delisle, A., Y. Descôteaux, et J.-L. Sasseville (1979)
L'évaluation des répercussions environnementales. Une approche systémique au contrôle de la qualité des actions humaines. Rapport No. 111. Québec: INRS-Eau, Université du Québec, 69 p., (INRS-Eau).

Delisle, C.E. (1981)
Séminaires — environnement: résumés des travaux présentés au Professeur C.E. Delisle. Montréal: Ecole Polytechnique de Montréal, Département de génie civil, Section du génie de l'environnement, 230 p., (École Polytechnique).

Dembicki, H. (1983)
Monitoring of Northern Megaprojects: Missed Opportunities? A Case Study of the Norman Wells Oil field Development and Pipeline Project. Masters Thesis. Vancouver: School of Community and Regional Planning, University of British Columbia, (British Columbia).

Descôteaux, Y., and A. Delisle (1979)
Les citoyens et l'évaluation de la qualité des actions humaines. Rapport Scientifique No. 107. Québec: INRS-Eau, Université du Québec, 184 p., (INRS-Eau).

Desmarais, G., D. Clavet, et J.M.M. Dubois. (1982)
"Méthodologie d'identification et d'évaluation des zones sensibles: aspects physiques," dans Roche Associés, *Étude des répercussions environnementales, forages hauturiers d'exploration dans le Golfe du Saint-Laurent*. Québec: S.O.Q.U.I.P., 5 p.

Dewees, D.N. (1983)
"Instruments of Choice in Environmental Policy," *Economic Inquiry*, 21: 53-70, (Toronto).

Dewees, D.N. (1983)
"Regulating Environmental Quality," in D.N. Dewees, (ed.), *The Regulation of Quality: Products, Services, Workplaces, and the Environment*. Toronto: Butterworths, (Toronto).

DiSanto, J.E. (1981)
"Public Participation in Social Impact Analysis." A paper presented to *A Seminar Conference on Public Participation in Resource Management*, Banff Centre, May, 1981, (Calgary).

DiSanto, J.E. (1981)
"Public Participation: What Does it Mean?" A paper presented to the *Canadian Electrical Association*, March, 1981, (Calgary).

DiSanto, J.E., J. Frideres, S. Goldenberg and U. Fleising (1981)
"Industry, Government and Community Relations in Social Impact Assessment," in F. Tester and W. Mykes (eds.), *Social Impact Assessment, Theory, Method, and Practices*, Calgary: Detselig Enterprises Ltd., (Calgary).

Dooley, J.E. (1982)
"Decision-making in Environmental Crisis Situations," in H.C. Kunreuther and E.V. Ley, (eds.) *The Risk Analysis Controversy: An Institutional Perspective*. Berlin: Springer-Verlad, (Toronto).

Dooley, J.E. (in preparation)
"Risk and Environmental Management," in *New Directions in Environmental Impact Assessment: The Canadian Experience*. Toronto: Institute for Environmental Studies, University of Toronto, (Toronto).

Dooley, J.E. (in preparation)
"Risk Theory and the Environmental Assessment Process". A paper to be presented to the NATO Advanced Study Institute.

Dooley, J.E. and I. Burton (1983)
"Risk Assessment for the Transport of Hazardous Materials," in J.T. Rogers and D.V. Bates, (eds.) *A Syposium on the Assessment and Perception of Risk to Human Health in Canada*. Toronto: Royal Society of Canada and Science Council of Canada, (Toronto).

Dooley, J.E. and J.D. Robinson (1982)
Nuclear Risk Management in Canada: An Examination of the Ontario Royal Commission on Electric Power Planning. Toronto: Institute for Environmental Studies, University of Toronto, (Toronto).

Dooley, J.E. and P. Byer (1982)
"Decision-making and Risk Management," in I. Burton, C.D. Fowle and R.S. McCullough, editors, *Living and Risks: Risk Management in Canada*. Toronto: Institute for Environmental Studies, University of Toronto, Environmental Monograph, (Toronto).

Dorcey, A.H.J. (1980)
"Coastal Zone Management in Western Canada," *Canadian Issues*, Vol. 3, No. 1, (British Columbia).

Dorcey, A.H.J. (1981)
"Setting Priorities for Water Resources Research in B.C. and the Yukon: Responding to the Crisis." Keynote paper for *Pacific and Yukon Regional Workshop on Water Resources Research in Canada*, Inland Waters Directorate, Environment Canada, May, 11, 1981, (British Columbia).

Dorcey, A.H.J. (1981)
"The Uncertain Quest for a Management Strategy in the Fraser Estuary," *Canadian Water Resources Journal*, Vol. 6, No. 4, (British Columbia).

Dorcey, A.H.J. (in preparation)
"Coastal Zone Management as a Bargaining Process," *Coastal Zone Management Journal*, (British Columbia).

Dorcey, A.H.J., M.W. McPhee and S. Sydneysmith (1980)
Salmon Protection and the B.C. Coastal Forest Industry: Environmental Regulation as a Bargaining Process. Vancouver: University of British Columbia, Westwater Research Centre, (British Columbia).

Dorcey, A.H.J. and K.J. Hall (1981)
Setting Ecological Research Priorities for Management: The Act of the Impossible in the Fraser Estuary. Vancouver: Westwater Research Centre, University of British Columbia, 83 pp., (British Columbia).

Dorcey, A.H.J., (ed.) (1979)
Coastal Resources in the Future of British Columbia. Vancouver: Westwater Research Centre, University of British Columbia, 138 pp., (British Columbia).

Dorney, R.S. (1983)
"Predicting Environmental Impacts of Development Projects on Land Use." at *Workshop in New Directions in Environmental Impact Assessment: The Canadian Experience*, University of Toronto, October 27-28, 1983, Toronto, 33 p. (To be published in proceedings), (Waterloo).

Dorney, R.S. and D.W. Hoffman (1979)
"Development of Landscape Planning Concepts and Management Strategies for Urbanizing Agricultural Regions," *Landscape Planning*, 6:151-177, (Waterloo).

Dorney, R.S., P. Eagles, B. Evered and D. Hoffman (1981)
"Ecosystem Planning, Analysis and Design in Ontario as Applied to Environmentally Sensitive Areas," A.A.A.S., (Waterloo).

Dubois, J.-M.-M. (1980)
"Télédéctection et études d'impact sur le littoral des barrages hydroélectriques (Québec)," dans *Bulletin de l'association internationale de géologie de l'ingénieur*, nº 2, p. 87-90. (Sherbrooke).

Dubois, J.-M.-M., G. Demarais, et M. Robertson (1981)
"Géomorphologie, télédétection et aménagement hydroélectrique au Québec," dans J.-M.-M. Dubois (éd.), *Le géographe et l'aménagement au Québec*. Bulletin de Recherche No. 57-58. Sherbrooke: Université de Sherbrooke, Département de géographie, p. 74-88. (Sherbrooke).

Duerden, F. (1982)
"Socio-economic Impacts of Highway Construction in Northwest Canada." *Alaska Highway Symposium*, Ft. St. John, B.C., (Ryerson).

Duinker, P.N. (1983)
"Some Comments on the Scientific Basis of Environmental Impact Assessment." Paper presented at *Environmental Impact Assessment: Preparing and Presenting the Evidence*, 3-4 May, 1983, Toronto, Ontario, (New Brunswick).

Duinker, P.N. (1983)
"The Prediction of Environmental Impacts: A Discussion Paper." Prepared for Federal Environmental Assessment Review Office, Hull, Quebec, (New Brunswick).

Duinker, P.N. and G.E. Beanlands (1982)
"Environmental Impact Assessment Procedures in Canada: Improvements from a Scientific Perspective." Paper presented at *ICOE'82: Second International Conference on Oil and the Environment*, August, 1982, Halifax, Nova Scotia, (New Brunswick and Dalhousie).

Duinker, P.N. and G.E. Beanlands (1983)
"An Ecological Framework for Environmental Impact Assessment in Canada," *Geographical Inter-University Resource Management Seminars*, 13: 97-152, (New Brunswick and Dalhousie).

Duinker, P.N. and G.E. Beanlands (1983)
Ecology and Environmental Impact Assessment: An Annotated Bibliography. Halifax: Dalhousie University, Institute for Resource and Environmental Studies; also Hull, Québec: Federal Environmental Assessment Review Office, 40 pp., (New Brunswick and Dalhousie).

Duinker, P.N. et G.E. Beanlands (1983)
Ecologie et évaluation environnementale, bibliographie annotée. Halifax: Dalhousie University, Institute for Resource and Environmental Studies; Hull, Québec: Bureau fédéral d'examen des évaluations environnementales, 44 p., (New Brunswick et Dalhousie).

Duplessis, Y., J. Hétu et J. Piette (1982)
La Protection juridique de l'environnement au Québec. Montréal: Les Editions Thémis Inc., 707 p., (Montréal).

Elder, P.S. (1981)
Heating Up Cold Lake — Public Participation and Esso Resources Heavy Oil Project. Faculty of Environmental Design Occasional Paper. Calgary: University of Calgary, Faculty of Environmental Design, 84 pp., (Calgary).

Elder, P.S. (1982)
"Project Approval, Environmental Assessment and Public Participation," *The Environmentalist 2* (1982), pp. 55-71, (Calgary).

Ellis, D.V. (1980)
"Environmental Consequences of Breaks and Interrupted Construction at Marine Outfalls in British Columbia," *Coastal Discharges*. Institution of Civil Engineers, pp. 123-126, (Victoria).

Ellis, D.V. (1982)
"Kitsault, B.C. — Technical Communication in a Non-technical World," *Marine Pollution Bulletin*, Vol. 13, No. 3: 78-80, (Victoria).

Ellis, D.V. (1982)
"Ocean Disposal in British Columbia," *Oceans 82*, Marine Technology Society, pp., 1101-1106, (Victoria).

Ellis, D.V. and J.D. Popham (1983)
"Accidental Formation and Subsequent Disappearance of a Contaminated Beach," in A. MacLachlan and T. Erasmus (eds.), *Sandy Beaches as Eco-systems. Proceedings of the First International Symposium on Sandy Beaches, Port Elizabeth, South Africa, January 17-21, 1983*, pp. 719-726, (Victoria).

Ellis, D.V. and S.F. Cross (1982)
"A Protocol for Inter-Laboratory Calibrations of Biological Species Identifications (Ring Tests)," *Water Research*, Vol. 15:1107-1108, (Victoria).

Emond, D.P. (1982)
"Environmental Law at the Limits of Incremental Development," in A. Lucas and P. Finkle, (eds.), *Environmental Law in the 1980's: A New Beginning*. Calgary: Canadian Institute of Resources Law, (York).

Emond, D.P. (in preparation)
"Fairness and the Federal Environmental Assessment and Review Process", in A. Lucas, P. Finkle, D. Marshall, (eds.), *Fairness and Environmental and Social Impact Assessment*. Calgary: Canadian Institute of Resources Law, (York).

Emond, D.P. and R. Cotton (1981)
"Environmental Impact Assessment," in J. Swaigen, (ed.), *Environmental Rights in Canada*. Toronto: Butterworths, (York).

FitzGibbon, J., T. O'Hara, J. Pomeroy and J. Richards (1982)
"Baseline Study of Meewasin Valley River Resource," Report for the Meewasin Valley Authority, July 1982, (Saskatchewan).

FitzGibbon, J.E. and Bell (1982)
"Terrain Sensitivity for Road Development in Northern Saskatchewan," *Saskatchewan Geography*, No. 1, (Guelph).

Flynn, J.D. (1980)
"On the Trail of Community Solidarity," *Rural Sociological Association*, Ithaca, New York (Western Ontario).

Flynn, J.D. (1981)
"Raising Community Spirit: The Policy Implications of Research on Community Solidarity," *Atlantic Association of Sociology and Anthropology*, Sackville, New Brunswick, (Western Ontario).

Flynn, J.D. (1981)
"The Construction of Very Large Nuclear Generating Stations in Rural Areas: A General Systems Model of Structural Focusing," *XIth Congress of the European Society for Rural Sociology*, Helsinki, Finland, (Western Ontario).

Flynn, J.D. (1982)
"Development or Dependency: General Systems Approach to Unequal Relations Among Communities." *World Congress of Sociology*, Mexico, (Western Ontario).

Francis, G.R., J.J. Mugnuson, H.A. Regier and D.R. Talhelm (1979)
Rehabilitating Great Lakes Ecosystem. Great Lakes Fishery Commission Technical Report No. 37, (Toronto).

Freeman, M.M.R. (1982)
"An Ecological Perspective on Man-Environment Research in the Hudson and James Bay Region," *Naturaliste canadien, (Rev. Ecol. Syst.)*, 109: 955-963, (Alberta).

Freeman, M.M.R. (1982)
Contributor to: *Aboriginal/Subsistence Whaling (with special reference to the Alaska and Greenland fisheries)*. Report of

the cultural anthropology panel. Reports of the International Whaling Commission, Special Issue 4, pp. 35-49, (Alberta).

French, H. (1979)
"Oil and Gas Exploration in the High Arctic Islands: Problems and Prospects," *Marburger Geographische Schriften*, 79, pp. 13-36, (Ottawa).

French, H. (1981)
Site Investigations and Air Photo Interpretation of Proposed Hoodoo River Wellsite, Ellef Rignes Island, N.W.T. Report prepared for Panarctic Oils Ltd., Calgary, (Ottawa).

Frideres, J., J. DiSanto, S. Goldenberg and U. Fleising (1979)
"Social Impact Assessment: The Role of Social Consultants in Alberta, Canada," *Social Impact Assessment*, Vol. 38, 39, February-March, (Calgary).

Frideres, J., J. DiSanto, U. Fleising and S. Goldenberg (1982)
"Community Participation Programmes: Implications of Organizational Structure for Implementation and Success," *Journal of General Management*, Vol. 7, No. 4, Summer, (Calgary).

Gariépy, M. (1982)
"L'étude des impacts de projets, programmes et politiques, et le système de planification," dans *Les nouvelles forces que façonnent l'aménagement du territoire*. Hull: Actes du congrès national, L.C.U., (Montréal).

Gariépy, M. (1983)
"Environmental Impact Assessment and Planning in the Energy Sector: The Case of the Province of Quebec." Communication of Annual Conference of the American Collegiate Schools of Planning, San Francisco, October, (Montréal).

Gibson, R.B. (1982)
Values, Interests and Preferences: Non-Factual Considerations in the Assessment of Beaufort Sea Hydrocarbon Production and Transportation Proposals. Ottawa: Beaufort Sea Alliance, (Toronto).

Gilbert, R. (1980)
Environmental Studies in Maktak, Coronation, and North Pangnirtung Fiords. Final report of research to Petro-Canada. Kingston: Queen's University, Department of Geography, 97 pp., (Queen's).

Gilbert, R., A. Aitken and B. McLaughlin (1982)
A Biophysical Survey of Coastal Environments in the Vicinity of Nain, Labrador. Final report of research supported by Petro-Canada Exploration Inc. Kingston: Queen's University, Department of Geography, 124 pp., (Queen's).

Goldenberg, S., U. Fleising, J. Frideres and J. DiSanto (1979)
"A Calorie or a Kilowatt: The Dodds-Roundhill Development Controversy," *Alternatives: Perspectives on Environment and Society*, (Calgary).

Goldenberg, S., J. Frideres, U. Fleising and J. DiSanto (1980)
"Public Participation: Communication Process or Judicial Structure," *Social Impact Assessment*, August, (Calgary).

Graham, D.S. (1981)
"Environmental Regulation and Constraints Upon Small Hydro Development in California, USA," in *Canadian Water Resources Journal*, Vol. 6, No. 3: 295-302, (Western Ontario).

Graham, D.S. (in preparation)
"Status of Small Hydroelectric Development in Ontario, Canada," in *Proceedings of TVA-ASCE Conference Water Power '83*. Knoxville, September 1983, (Western Ontario).

Graham, K. (1982)
"Corporatism, Elite Accommodation and Pluralism: Approaches to Public Participation and Private Accountability in Northern Development." Presented to the *Atlantic Provinces Political Science Association*, October, 1982, (Queen's).

Graham, K. (1982)
The Development of the Polaris Mine. Kingston: Queen's University, Eastern Arctic Study, Institute of Local Government, 59 pp., (Queen's).

Graham, K., E. Moore, M.P.S. Brown, and A. King (1982)
An Evaluation of Funding of Public Participation in the Beaufort Sea Environmental Assessment Panel Review. Prepared under contract to the Federal Environmental Assessment Review Office. Kingston: Queen's University, Institute of Local Government and Social Program Evaluation Group, (Queen's).

Graham, K., M.P.S. Brown and M.J. Wojciechowski (1982)
Oil and Gas Development in the Beaufort Sea, Eastern Arctic Study Case Study Series. Kingston: Queen's University, Eastern Arctic Study, (Queen's).

Green, M.B. and R.M. Bone (1983)
The Norman Wells Energy Project: A Problem of Monitoring. Saskatoon: University of Saskatchewan, Northern Program, (Western Ontario and Saskatchewan).

Grima, A.P. (1981)
"Analysing Public Inputs: A Summary and Discussion," *Proceedings of Research Conference of Public Involvement and SIA*. Tucson: University of Arizona, (Toronto).

Grima, A.P. (1983)
"Analysing Public Inputs to Environmental Planning: A Summary and Discussion of Public Involvement in Great Lakes Management," in G.A. Daneke *et al.* (eds.), *Public Involvement and Social Impact Assessment*. Westview Press, pp. 111-120, (Toronto).

Grima, A.P. (1983)
"Participatory Rites: Integrating Public Involvement in Environmental Impact Assessment." A paper presented at the *Workshop on New Directions in Environmental Impact Assessment: The Canadian Experience*, University of Toronto, October 27-28, (Toronto).

Guay, L. (1982)
"Les besoins humains: entre la nature et la culture," dans *De toute urgence*, vol. 13, nº 1, p. 3-43, (Laval).

Guay, L. (1982)
"Satisfaction et trajectoire résidentielle: commentaires." *Colloque de l'INRS-Urbanisation*, juin, 1982, (communication), (Laval).

Hamel, C. (1980)
Ouvrage de contrôle sur la rivière des Milles Îles. Études des répercussions sur l'environnement. Cie d'ingéniérie Shawinigan. Rapport d'étape. Ministère de l'Environnement, Québec et Cie d'Ingéniérie Shawinigan, Montréal (UQAM).

Harding, J. (1984)
"A Content Analysis of Uranium Mining Transcripts." Presentation at the *Western Association of Sociology and Anthropology Conference*, 10-12 February, Regina, (Regina).

Harding, J. and I. Alesich (1983)
"Preliminary Findings on a Content Analysis of Uranium Mining Transcripts." Presentation at the *Human Context of Science and Technology Conference*, 17-20 May, Calgary, (Regina).

Harmsen, R. (1982)
"Pesticides and the Environment". *Proceedings of the Canadian Council of Resource and Environment Ministers Pesticide Workshop*, pp. 162-70, (Queen's).

Harvey, A.S., C.G. Macdonald, W.S. Macdonald, D.H. Elliott, S.M. Clark and K.S. Wood (1981)
Blueprint of Core Social Indicators. Halifax: Institute of Public Affairs, Dalhousie University, (Dalhousie).

Heber, R.W. (1981)
Social Environmental Impacts of Offshore Petroleum Development in Nova Scotia. Master of Environmental Studies Thesis. Halifax: Dalhousie University, Institute for Resource and Environmental Studies, (Dalhousie).

Hegadoren, D.B. and J.C. Day (1981)
"Socio-economic Mine Termination Policies: A Case Study of Mine Closure in Ontario," *Resources Policy*, Vol. 7, No. 4: 265-272, (Simon Fraser).

Hilts, S.G. (1981)
Environmental Impact Statement: Christie Gardens Development. Guelph: Department of Land Resource Science, University of Guelph, (Guelph).

Hilts, S.G. (1982)
"Natural Areas of Provincial Significance," in *Seasons*, Vol. 22, No. 2: 7-8, (Guelph).

Hilts, S.G. and D. Bond, R. McBride and M. Miller (1981)
A Demonstration of the Land Evaluation Model (LEM2) for Ontario: Data Base. Land Evaluation Project Technical Report 4/81. Guelph: University of Guelph, (Guelph).

Hilts, S.G. and M. Parker (eds.) (1980)
Environmentally Significant Areas in Southern Bruce County. Centre for Resources Development Publication No. 101. Guelph: University of Guelph, (Guelph).

Holisko, G. (1980)
The Environmental Assessment and Review Process: An Analysis of the Screening Phase. Vancouver: School of Community and Regional Planning, University of British Columbia, (British Columbia).

House, D. (1983)
"Oil and Argentia: Community and Development in a Weak Regional Economy." A paper presented to the *8th International Seminar on Marginal Regions*, Gregynog, Wales, August, 1983, (Memorial).

Howard, L. (1979)
Social Impact Assessment — The Bighorn and High Arrow Dams in Retrospect. Master of Environmental Design Thesis Calgary: University of Calgary, Faculty of Environmental Design, (Calgary).

Jessen, S., J.C. Day and J.G. Nelson (1983)
"Assessing Land Use Regulations in Coastal Wetlands: The Case of Long Point, Lake Erie, Ontario," *Coastal Zone Management Journal*, Vol. 11, No. 1-2: 91-115, (Waterloo).

Joyal, R. (1983)
L'impact des emprises de lignes de transport hydroélectrique sur l'orignal. Rapport présenté à Hydro-Québec, février, 1983 (UQAM).

Joyal, R., Lamothe, P. et R. Fournier (sous presse)
"L'effet des corridors de transport hydroélectrique sur les populations d'orignaux," dans *Canadian Journal of Zoology*, 61, (UQAM).

Kalin, M. (1980)
An Investigation into Selected Ecological Aspects of the Aquatic and Terrestrial Environment of an Abandoned Uranium Mill Tailings Pond, Bancroft Ontario, Canada. Toronto: University of Toronto, Institute for Environmental Studies, (Toronto).

Kalin, M. (1982)
Environmental Conditions of Two Abandoned Uranium Mine Tailings Sites in Northern Saskatchewan. A Report submitted to Saskatchewan Environment, 94 pp., (Toronto).

Kalin, M. and C. Caza (1982)
"An Ecological Approach to the Assessment of Vegetation Cover on Inactive Uranium Mill Tailings Sites," *Proceedings, International Symposium on Management of Wastes from Uranium Mining and Milling*. Albuquerque: IAEA-SM-262/2, (Toronto).

Kelly, D.M., J. Underwood, and D. Thirumurthi. (1980)
"Impact of Construction of a Hydroelectric Project on the Water Quality of Five Lakes in Nova Scotia," *Canadian Journal of Civil Engineering*, Vol. 7, No. 1: 173-183, (TUNS).

King, J. (1981)
An Evaluation of the Federal Environmental Assessment and Review Process: The Case of South Davis Strait. Master of Arts Thesis. Waterloo: University of Waterloo, (Waterloo).

Klein J.L. et M. Dianne (1982)
"L'aménagement intégré des ressources. Une alternative à la marginalité rurale." *Interventions économiques*, No. 8 (1982), p. 85-89. (UQAC).

Knight, K.D., C. Dufournaud and G. Mulamoottil (1983)
"Conceptual Ecological Modelling and Interaction Matrices

as Environmental Assessment Tools in Coastal Planning," in *Proceedings — Integration of Ecological Information in Coastal Engineering*, Rotterdam, June, pp. 559-567, (Waterloo).

Lamb, L. (1980)
Environmentally Sensitive Areas of Lambton County. Sarnia: Lambton County Planning Office, (Waterloo).

Lamb, L. (1982)
Environmentally Sensitive Areas of Perth County. Stratford: Perth County Planning Office, (Waterloo).

Lang, R. and A. Armour (1980)
Environmental Planning Resourcebook. Montreal: Multiscience Publications Ltd., 388 pp., (York).

Lang, R. and A. Armour (1980)
The Assessment and Review of Social Impacts. Ottawa: Federal Environmental Assessment Review Office, 163 pp., (York).

Lang, R. and A. Armour (1982)
Planning Land to Conserve Energy. Ottawa: Environment Canada, Lands Directorate, 212 pp., (York).

Legge, A.H. and J.C. Bogner (1982)
"Sulphur in Forests: An Application of Ecological Monitoring," in *Proceedings of the Symposium on Acid Emissions in Alberta and their Ecological Effects*, March 9-12, 1982, Edmonton, Alberta, 21 pp., (Calgary).

Lerner, S.C. (1979)
"Social Impact Assessment." *Workshop on Issues in Environmental Impact Assessment*, Nov. 8, 1979. York University: Faculty of Environmental Studies, (Waterloo).

Lerner, S.C. (1980)
"Social Impact Assessment." *Seminar for Ontario Environmental Assessment Board*, Toronto, Oct. 22, 1980, (Waterloo).

Lerner, S.C. (1981)
"A Proactive Approach to Environmental Challenges: Beyond Impact Assessment." Session Keynote paper presented at *Society for the Study of Social Problems, Annual Meetings* (Environmental Problems Division), Toronto, August 22, 1981, (Waterloo).

Lerner, S.C. (1981)
"Conflict Anticipation and Management in the Implementation of Environmental Policy." Paper presented at the *SSRC Law and Psychology Conference*. Trinity College, Oxford, April 7, 1981, (Waterloo).

Lerner, S.C. (1981)
"Social Impact Assessment in an Era of Relative Scarcities," in F. Tester and W. Mykes (eds.), *Social Impact Assessment: Theory, Method and Practice*. Calgary: University of Calgary, Kananaskis Centre for Environmental Research, pp. 35-42, (Waterloo).

Lerner, S.C. (1982)
"Teaching Social Impact Assessment." Paper presented at the *International Conference on Social Impact Assessment*, Vancouver, October 24-27, 1982, (Waterloo).

MacKintosh, E.E. and E.J. Mozuraitis (1982)
Agriculture and the Aggregate Industry — Rehabilitation of Extracted Sand and Gravel Lands to an Agricultural After-use. Toronto: Ontario Ministry of Natural Resources, Industrial Mineral Background Paper #3, 44 pp., (Guelph).

Maclaren, V.W. (1983)
"Assessing Social Impacts in an Energy-from-Waste Project." A paper presented to *Facility Siting and Routing '84. Energy and Environment*, Banff, Alberta, April, 1984, (with J.B. Whitney). (Toronto).

Maclaren, V.W. (1983)
"Techniques and Methods for Assessing the Environmental Impacts of Megaprojects in Canada." A paper presented to the *China-Canada Conference*, McMaster University, Hamilton, November, 1983, (Toronto).

McAllister, A.B. (1982)
Mineral Exploration in the Baker Lake Area. Kingston: Queen's University, Eastern Arctic Study, Institute of Local Government, 58 pp., (Queen's).

McFarlane, K.I. (1981)
Post-Development Biophysical Impact Assessment of Diplomat Coal Mine, Forestburg, Alberta. Master of Environmental Design Thesis. Calgary: University of Calgary, Faculty of Environmental Design, (Calgary).

McGuire, T. (1979)
Planning and the Natural Environment: A Case Study of the Davis Tannery Development in Kingston, Ontario. Master's of Planning Report. Kingston: Queen's University, School of Urban and Regional Planning, (Queen's).

McLellan, A.G. (1982)
"The Environmental Planning Process in 80's in Ontario." Paper presented to the Goodroads Association, Annual Conference, Toronto, February, 1982, (Waterloo).

McMillan, M. (1979)
"Perspectives on the Restructuring of Environmental Decision-Making Institutions: The Case of the *Canada Water Act*," *Canadian Water Resources Journal*, 4: 52-69, (Alberta).

McMillan, M. (1980)
"An Extension of the Hedonic Approach for Estimating the Value of Quiet," *Land Economics*, Vol. 56: 315-328, (with B. Reid and D. Gillen), (Alberta).

McNeil, R., J.P. Beaumont, N. David, C. Hamel, E. Magnin, B. Pinel-Alloul et L. Roy-Venne (1979)
Étude préliminaire d'impact sur l'environnement biophysique: aménagement des rapides de Lachine. Rapport présenté à la Direction Environnement de l'Hydro-Québec. Centre de recherches écologiques de Montréal, 230 p., (Montréal et UQAM).

McPhee, M.W. (1980)
"Public Involvement in Setting and Enforcing Pollution Control Standards in British Columbia," in W.R.D. Sewell and M.L. Baker, (eds.), *Water Problems and Policies*. Cornett Occasional Papers, No. 1. Victoria: University of Victoria, Department of Geography.

McPhee, M.W. (1982)
"Planning for Offshore Oil and Gas Development: The B.C. Perspective," in *Proceedings of the West Coast Offshore Oil and Gas Conference*. November, 1982, Vancouver, B.C.

McPhee, M.W. (1982)
Legislative and Administrative Options for Establishing Mariculture Management Areas on the Coast of British Columbia. University of British Columbia, Westwater Research Centre, working paper.

McPhee, M.W. and J. Schweithelm (1983)
"Onshore Effects of Offshore Oil and Gas Development," in J.T.E. Gilbert, (ed.), *Technical Guidelines for Offshore Oil and Gas Development*. Hawaii: Environment and Policy Institute, East-West Center.

Michalenko, G. and R. Suffling (1982)
"Social Impact Assessment in Northern Ontario, the Reed Paper Controversy," in C. Geisler *et al.* (eds.), *The Social Impact of Rapid Resource Development on Native Peoples*. Ann Arbor: University of Michigan Press, (Waterloo).

Migneron, J-G. (1980)
Simulation ultrasonore de l'impact acoustique des autoroutes. Québec: Université Laval, CRAD, 23 p., (Laval).

Migneron, J.-G. (1981)
Le bruit communautaire en milieux urbains-analyse, contrôle et aspect législatif. Québec: Université Laval, CRAD, 46 p., (Laval).

Migneron, J.-G. (1982)
Evaluation du bruit de la circulation automobile dans les logements situés en bordure des autoroutes urbaines. Québec: Université Laval, CRAD, 183 p., (Laval).

Migneron, J.-G. (1982)
Impact psychologique et économique du bruit des autoroutes urbaines pour les secteurs résidentiels les plus proches. Québec: Université Laval, CRAD, 112 p., (Laval).

Mikalson, D. (1980)
Approach and Methodologies for Environmental Impact Assessment. Master of Environmental Design Thesis. Calgary: University of Calgary, Faculty of Environmental Design, (Calgary).

Miller, G.C. (1981)
Industrial Development in the Eastern Arctic Study Area: A Preliminary Overview. Kingston: Queen's University, Eastern Arctic Study, Institute of Local Government, 31 pp., (Queen's).

Mills, S. (1979)
"Environmental Impact Reporting in New Zealand: A Study of Government Policy in a Period of Transition," *New Zealand Law Journal*, (Dalhousie).

Mitchel, J. (1981)
Environmental Quality Management for Pipelines. Master of Environmental Design Thesis. Calgary: University of Calgary, Faculty of Environmental Design, (Dalhousie).

Mitchell, B. (1979)
"Environmental Impact Assessment," in *Geography and Resource Analysis*. New York: Longman Press, pp. 228-255, (Waterloo).

Mitchell, B. and G. Priddle (1981)
"The Long-Term Economic and Behavioral Impact of an Electric Power Transmission Corridor on the Rural Environment: Reality and Perception," in K. Finsterbusch and C.D. Wolf (eds.), *Methodology of Social Impact Assessment*, Strousbury: Hutchinson Poss Publishing, pp. 370-384, (Waterloo).

Morrison, K., N. Thérien and G. Spiller (1982)
"A Dynamic Model of Aquatic Plant Growth," in *Simulating The Environmental Impact of A Large Environmental Hydroelectric Project*. Simulation Councils Proceedings Series, Vol. 9, No. 2: 99-118, (UQAM).

Morrison, K.A., and N. Thérien (1981)
"The Impact of Reservoir Flooding on a Freshwater Benthic Community." Paper presented at the *International Symposium on Energy and Ecological Modelling*, ISEM/ORNL, University of Louisville, Kentucky, April 20-24, (UQAM).

Morval, J. (1981)
Introduction à la psychologie de l'environnement, Bruxelles: Pierre Mardaga, (Montréal).

Muller, R.A. and P.J. George (1982)
Evaluating the Environmental Impact of Hydroelectric Development in Northern Ontario: A Preliminary Report. Hamilton: McMaster University, Technology Assessment in Subarctic Ontario, Report Number 1, (McMaster).

Muller, R.A. and P.J. George (1983)
Optimal Expansion of Hydroelectric Capacity in Northern Ontario. Hamilton: McMaster University, Technology Assessment in Subarctic Ontario, Report Number 6, (McMaster).

Munn, R.E. (1979)
Environmental Impact Assessment: Principles and Procedures, SCOPE 5, Chichester: John Wiley and Sons, (Toronto).

Munn, R.E. (1982)
"Environmental Impact Assessment: A Useful Development Tool," *Magingira*, Vol. 6, No. 6, (Toronto).

Munn, R.E. (1983)
"The Atmospheric Content of EIAs," in *NATO Advanced Study Institute on Environmental Impact Assessment*. The Hague: M. Nijhoff Pubs., (Toronto).

Munn, R.E. (1983)
"The Theory and Application of Modelling in EIAs," in *NATO Advanced Study Institute on Environmental Impact Assessment*. The Hague: M. Nijhoff Pubs., (Toronto).

Nadeau, R. (1982)
"Impact du tourisme de villégiature sur l'environnement," dans R. Nadeau (éd.), *Le tourisme, aspects théorétiques et pratiques au Québec*. Montréal: Ed. Solidis, p. 135-165. (Sherbrooke).

Nelson, J.G. and J. King (in preparation)
Evaluating the Federal Environmental Assessment and Review Process with Special Reference to South Davis Strait, Northern Canada, (Waterloo).

Nelson, J.G. and S. Jessen (1981)
Scottish and Alaskan Offshore Oil and Gas and the Canadian Beaufort Sea. Ottawa: Canadian Arctic Resources Committee and University of Waterloo, Faculty of Environmental Studies, (Waterloo).

Nelson, J.G. and S. Jessen (1982)
"Applicability of the Scottish and Alaskan Offshore Oil and Gas Experience to the Canadian Beaufort Sea," *Coastal Studies and Canadian Geography*. No. 1. Halifax: St. Mary's University, pp. 60-64, (Waterloo).

Nelson, J.G. and S. Jessen (1982)
"Managing Petroleum Development in the Shetland Islands, Alaska's North Slope, and Canada's Beaufort Sea." Occasional Paper 19. Vancouver: The Centre for Human Settlements, University of British Columbia, (Waterloo).

Nelson, J.G. and S. Jessen (s.d.)
"Summary: Applicability of the Scottish and Alaskan Offshore Oil and Gas Experience to the Canadian Beaufort Sea," *Shore-Zone Report*, No. 2. Ottawa: Environment Canada, pp. 28-32, (Waterloo).

Nelson, J.G., J.C. Day and S. Jessen (1982)
"Regulation for Environmental Protection: The Nanticoke Industrial Complex, Ontario, Canada," *Environmental Management*, Vol. 5, No. 5: 385-395, (Waterloo).

Nesbitt, T. (1982)
Northern Assessment: A Play within a Play. Master of Environmental Studies Thesis. Downsview: York University, Faculty of Environmental Studies, (York).

Newkirk, R.T. (1979)
Environmental Planning for Utility Corridors. Ann Arbor: Ann Arbor Publishers, (Waterloo).

Newkirk, R.T. (1983)
"Objective Evaluation of Visual Values, Chapter 4," in Rowe, R.D. and L.G. Chestnut, (eds.) *Managing Air Quality and Scenic Resources at National Parks and Wilderness Areas*. Westview Press, (Waterloo).

Newkirk, R.T. (in preparation)
"Discrete Systems Simulation in Resource Management Problems," in *Papers of the Canadian-Polish Seminar on Systems Approaches to Regional Studies*. Waterloo: University of Waterloo, (Waterloo).

Norton, M. (1982)
Communicative Competence for Nuclear Power Policy Intervention. A major paper for the degree of Master in Environmental Studies. Downsview: York University, Faculty of Environmental Studies, (York).

O'Rielly, K. (in preparation)
An Evaluation of the Territorial Land Use Regulations as a Land Management Tool in the Yukon. Master of Arts Thesis. Waterloo: University of Waterloo, School of Community and Regional Planning, (Waterloo).

Olynyk, J. (1984)
Effects of EIA on Project Planning by Oil and Gas Companies. Master's Thesis. Vancouver: School of Community and Regional Planning, University of British Columbia, (British Columbia).

Ouellet, P. (1979)
Les impacts socio-économiques du projet Delaney. Diplôme en aménagement du territoire et développement régional. Québec: Université Laval, ATDR, (Laval).

Paehlke, R. (1979)
"James Bay Project: Environmental Assessment in the Planning of Resource Development," in O.P. Dwivedi, (ed.), *Environment and Resources Development*. Toronto: McClelland and Stewart, (Trent).

Paehlke, R. (1980)
"Guilty until Proven Innocent: Carcinogens in the Environment," *Nature Canada*, April/June, 1980, (Trent).

Page, R.J.D. (1981)
"The High Arctic: Environmental Concerns, Government Controls, and Economic Development" in M. Zaslow (ed.) *A Century of Canada's Arctic Islands, 1880-1980*. Ottawa: The Royal Society of Canada (Trent).

Parenteau, R. (1981)
Environnementalisme et urbanisme. Cahier de Recherche. Montréal: Faculté de l'aménagement, Université de Montréal, 136 p., (Montréal).

Parenteau, R. (1981)
"Ecologisme: débat social et évaluation technologique," *Sociologie et sociétés*, vol. 13, n° 1, p. 35-48, (Montréal).

Parker, G.R. (1982)
Contribution to: *Venture EIS — Aesthetic Environment Final Report*. Prepared by Hardy Associates (1978), Calgary for Mobil Oil Canada Ltd.. Section 3.4, (NSCAD).

Pederson, C. (1982)
Post Construction Study of the Shakwak Highway Environmental Assessment Review, Master of Environmental Design Thesis. Calgary: University of Calgary, Faculty of Environmental Design, (Calgary).

Pelletier, P. (1983)
Étude d'impact visuel de l'extension du port de Québec. Essai de maîtrise. Ste-Foy: Centre de recherches en aménagement et en développement, Université Laval, (Laval).

Perry, W. (1982)
An Analysis of Manitoba's Environmental Assessment and Review Process. Master of Natural Resources Management Thesis. Winnipeg: University of Manitoba, Natural Resources Institute, (Manitoba).

Pinkerton, E. (1983)
"All You Ever Wanted to Know About Oncorhychian Oligopsony". Paper presented, Department of Anthropology, University of California, October, 1983 (British Columbia).

Poirier, M. (1979)
"Analyse comparative des législations en matière de rapport d'impact écologique." Une communication verbale à l'École Polytechnique de Montréal, 6 février 1979. (Sherbrooke).

Poirier, M. (1979)
"Le projet de loi 69 modifiant la *Loi sur la qualité de l'environnement:* mythes et réalités." Une communication verbale à l'Association du barreau canadien (Section environnement). Hôtel Sheraton, Montréal. (Sherbrooke).

Poirier, M. (1980)
"Législation et politiques écologiques dans le domaine des transports." Une communication verbale au Centre George A. Scott pour les études en gestion des transports, 7 octobre 1980, Cornwall, Ontario. (Sherbrooke).

Poirier, M. et Krauss (1979)
"Le projet de loi 69 et la protection de l'environnement", *Canadian Environmental Law Reports*, 8, 49 p. (Sherbrooke).

Pomeroy, J., M. Green and J. FitzGibbon. (1982)
"Evaluation of Urban Riverscape Aesthetics," paper presented at the meetings of the Canadian Association of Geographers, Ottawa, (Saskatchewan).

Poulin, A. (1981, 1982)
Les routes et l'environnement (étude préliminaire): Cahier 1: 84 p. (1981); Cahier 2: 131 p. (1982); Rapports pour le Ministère des Transports du Québec, non publié. (Sherbrooke).

Poulin, A. (1980)
"La planification environnementale est-elle un mythe?" dans J.-M.-M. Dubois (éd.), *Le géographe et l'aménagement au Québec II*. Bulletin de recherche No. 57-58. Sherbrooke: Université de Sherbrooke, Département de géographie, p. 21. (Sherbrooke).

Poulin, A. (1982)
L'évaluation des impacts des lignes de haute tension. Rapport au Conseil régional de développement de l'Estrie. Sherbrooke: Université de Sherbrooke, Institut d'aménagement, 6 p.. (Sherbrooke).

Poulin, A. *et al.* (1979)
Étude d'impact des périphériques de Sherbrooke: Autoroutes 410 et 10. Limieux, Royer, Donaldson et Ass. Sherbrooke; Rapport au Ministère des Transports du Québec, 400 p., non publié. (Sherbrooke).

Press, M. (1979)
Public Involvement in the USDA Forest Service. Master's Degree Project, Calgary: University of Calgary, Faculty of Environmental Design, (Calgary).

Preston, R.J. (1983)
Algonquin People and Energy Development in the Subarctic. Hamilton: McMaster University, Technology Assessment in Subarctic Ontario, Report No. 4, (McMaster).

Priddle, G. (in preparation)
"Socio-economic Impact of Protected Areas in Coastal Zones," I.U.C.N., (Waterloo).

Provencher, L. et J.C. Thibault (1979)
Critères biophysiques relatifs aux choix de sites récréatifs à la campagne. Sherbrooke: Université de Sherbrooke, Département de géographie, Bulletin de recherche n° 5, 26-28, (édition synthèse revue et corrigée).

Rees, W.E. (1979)
"Environmental Impact Assessment: The Problems of Evaluation," *Proceedings, Second Environmental Impact Assessment Conference*. Vancouver: University of British Columbia Centre for Continuing Education, pp. 83-98, (British Columbia).

Rees, W.E. (1979)
Reflections on the Environmental Assessment and Review Process: A Discussion Paper. CARC Working Paper #1. Ottawa: Canadian Arctic Resources Committee, 38 pp., (British Columbia).

Rees, W.E. (1980)
"EARP at the Crossroads: Environmental Assessment in Canada," *Environmental Impact Assessment Review*, Vol., No. 4: 355-377, (British Columbia).

Rees, W.E. (1980)
"Environmental Assessment and Review: The Case of McKinley Bay," *Northern Perspectives*, 8:2, pp. 2-10, (British Columbia).

Rees, W.E. (1980)
"The Role and Perceptions of Public Interest Groups," in C.R. Upton, (ed.) *Proceedings, Ninth Annual Workshop on Offshore Hydrocarbon Development*. Calgary: Arctic Institute of North America, pp. 283-305, (British Columbia).

Rees, W.E. (1981)
"Environmental Assessment and the Planning Process in Canada," in S.D. Clark (ed.), *Environmental Assessment in Australia and Canada*. Vancouver: Westwater Research Centre, University of British Columbia, pp. 3-38, (British Columbia).

Rees, W.E. (1983)
"Government Management Capability." A Brief to the Beaufort Sea Environmental Assessment Panel. Vancouver: School of Community and Regional Planning, University of British Columbia, (British Columbia).

Regier, H.A. (1979)
"Changes in Species Composition of Great Lakes Fish Communities Caused by Man." *Trans. 44th North American Wildlife and Natural Resources Conference*, pp. 550-556, (Toronto).

Regier, H.A. and D.J. Rapport (1980)
Ecology's Family Coming of Age in a Changing World, Biological Evaluation of Environmental Impacts. Washington: Council of Environmental Quality and U.S. Fish and Wildlife Service, pp. 49-65, (Toronto).

Regier, H.A. and J.E. Paloheimo (1982)
"Ecological Approaches with Multispecies Resources in Multiple-use Situations in Multi-stressed Freshwater Ecosystems." in M.C. Mercer, (ed.), *Proceedings of a Workshop on Multi-Species Approaches to Fisheries Management*, St. John's Newfoundland, November 1979, Canadian Fisheries and Aquatic Sciences, pp. 127-132, (Toronto).

Regier, H.A. and T.H. Whillans (1981)
"The Stress and General Problems of Concern with the Fish and Fisheries of Keating Channel and Contiguous Aquatic Systems," in H.G. Acres. *Assessment of the Impact of Dredging on the Keating Channel*, (Toronto).

Rheault, M. (1980)
Guide technique pour la cartographie appliquée à l'étude et la gestion des ressources naturelles. Parcs Canada. Ottawa: Environnement Canada, 136 p.

Ricketts, P., (ed.) (1982)
Marine and Coastal Studies in Geography. Published by Saint Mary's University on behalf of the Marine Studies and Coastal Zone Management Specialty Group of the Canadian Association of Geographers. (St. Mary's).

Rigby, B. (1980)
Recommendations Relating to the Development of Lancaster Sound, 1980-2000. A brief submitted to the Working Group on the Lancaster Sound Regional Study, May 25-27, 22 pp., (with D. Dixon, R. Flexer, D. Livingstone, J. Ropars), (Carleton).

Rigby, B. (1982)
Environmental Impact Assessment and the Need for Environmental Monitoring, Master's Thesis, 1982, Ottawa: Carleton University, Department of Geography, 78 pp, (Carleton).

Rigby, B. (1983)
"Environmental Research Activity in Canada." A paper presented to *Environmental Impact Assessment: Preparing and Presenting the Evidence*, a Corpus/Ecolog Seminar, May 3, 1983, 13 pp.

Rigby, B. (in preparation)
"New Directions in Environmental Assessment: The Need for Post-Development Audits." Toronto: Methuen Press.

Rigby, B. (1983)
"New Directions in Environmental Assessment: The Need for Post-Development Audits." A paper presented to *New Directions in Environmental Impact Assessment: The Canadian Experience*, October 28, 1983, Institute for Environmental Studies, University of Toronto.

Ripley, E.A. and R.E. Redmann (1982)
Environmental Impact of Mining in Canada. Kingston: Queen's University, Centre for Resources Studies, (Saskatchewan).

Roberts, L. (1982)
"Inuit Responses to Extensive Wage Employment." *Social Impact Assessment*. (forthcoming), (Manitoba).

Romsa, G.H. (1981)
The Ouellette Corridor: An Environmental Impact Study. A study completed for the City of Windsor. Windsor: University of Windsor, Department of Geography, 67 pp., (Windsor).

Ross, W.A. (1980)
"Environmental Impact Assessment in Canada: The Banff Highway Project," in *Proceedings of the Seminar Series on Transportation*, Centre for Transportation Studies, University of Manitoba, (Calgary).

Ross, W.A. (1980)
Banff Highway Project. A three page summary prepared for the Canadian Environmental Advisory Council, (Calgary).

Rounds, R.C. (1981)
"The Canadian Prairies in the 1980's: Problems and Progress in Wildlife Conservation," in *The Prairies in the 80's*, Manitoba Geographical Studies, Monograph Series, University of Manitoba, pp. 74-105, (Brandon).

Rounds, R.C. (1982)
"Land Use Changes in the Minnedosa Pot Hole Region of Southwestern Manitoba 1948-1970," *Blue Jay*, 40(1): 6-12, (Brandon).

Rounds, R.C. (1982)
"Riding Mountain National Park: A Bed of Roses or a Thorn in the Side." *Outdoor Canada*, 10(5): 26-31, (Brandon).

Salisbury, R.F. (1979)
"The North as Developing Nation," *Proceedings of the Eighth National Northern Development Conference*, Edmonton, pp. 72-79, (McGill).

Salisbury, R.F. (1980)
"Application and Theory in Canadian Anthropology: The James Bay Case," *Transactions of the Royal Society of Canada*, 17: 212-225, (McGill).

Salisbury, R.F. (1980)
"The Impact of James Bay — Ten years later," *Engineering Journal*, Vol. 63, No. 4: 3-6, (McGill).

Salisbury, F.R. and I. LaRusic (1981)
The Future of Ross River: Potential Effect of Road Construction and Mining Development on the Region. A report for the Department of Indian and Northern Affairs. Montreal: Social Science, Development and Cultural Change Consultations, 50 pp., (McGill).

Salisbury, R.F., M. Mayer-Renaud, et A. LeDoyen (1982)
Le role de l'expert dans la négotiation, (McGill).

Sasseville, J.L. (1981)
La gestion participative des ressources: Aspects sociaux, politiques et méthodologiques. Document Didactique n° 2, Québec: INRS-Eau, Université du Québec, 67 p., (INRS-Eau).

Sasseville, J.L., J. Décarie et G. Breton (1981)
La gestion des grands projets et l'évaluation environnementale: Le cas du projet Archipel. Québec: INRS-Eau, Université du Québec, 115 p., (INRS-Eau).

Sayer, R. (1982)
A Sensitivity Mapping Scheme Based on Ecological Land Surveys: Case Study Wood Buffalo National Park, Master of Arts Thesis. Ottawa: Carleton University, Department of Geography, (Carleton).

Schroeder, Roger (1980)
Factors Affecting Communication between Riding Mountain National Park and the Surrounding Region. Master of Resource Management Thesis. Winnipeg: University of Manitoba, Natural Resource Institute (Manitoba).

Semchuk, B. (1982)
An Assessment of the Environmental Impact of Drought on Waterfowl in Agro-Manitoba and Recommendations for Mitigation Measures. Master of Natural Resources Management. Winnipeg: University of Manitoba, Natural Resources Institute (Manitoba).

Sérodes, J.B. (1980)
Méthodologie d'étude des impacts physiques sur les estuaires des rivières nordiques du Québec à la suite de leur aménagement hydro-électrique. Rapport à Hydro-Québec. Québec: Université Laval, Département de génie civil, (Laval).

Sérodes, J.B. (1982)
Le phénomène de la sédimentation sur les battures de l'estuaire moyen du Saint-Laurent. Mémoire au Conseil consultatif de l'environnement, La Pocatière, 26 février, (Laval).

Sérodes, J.B., J.P. Troude, M. Dubé et J. Deschênes (1982)
Acquisition de données de base sur les processus sédimentaires et le pouvoir de transformation des zones intertidales de l'estuaire moyen du Saint-Laurent. Rapport à Environnement Canada. Québec: Université Laval, Département de génie civil, (Laval).

Sewell, W.R.D. (1979)
"Environmental Decision-making: The Unevenness of Commitment," in Norman Trieff (ed.), *Environment and Health*. Ann Arbor: Ann Arbor Science Publishers, pp. 605-624, (Victoria).

Sewell, W.R.D. (1979)
"Public Participation: Towards an Evaluation of Canadian Experience," in Barry Sadler (ed.), *Involvement and Environment, Proceedings of the Canadian Conference on Public Participation*, Environment Conservation Authority of Alberta, Edmonton, 1979, 2: 205-224, (Victoria).

Sewell, W.R.D. (ed.) (1979)
Where is Public Participation Going: An Annotated Bibliography Focusing on Canadian Experiences. Edmonton, Alta: Environment Council of Alberta, 146 pp., (Victoria).

Sewell, W.R.D. (1980)
"West Coast Oil Pollution Policies: Canadian Responses to Risk Assessment," in D.P. Dwivedi (ed.), *Resources and Environment: Policy Perspectives for Canada*. Toronto: McClelland and Stewart, pp. 216-242, (Victoria).

Sewell, W.R.D. (1981)
"The Process is the Product," in Barry Sadler (ed.), *Public Participation in Environmental Decision-making*. Edmonton: Environment Council of Alberta, pp. 161-165, (Victoria).

Sewell, W.R.D. and Phillips, S.D. (1979)
"Models for the Evaluation of Public Participation Programmes," *Natural Resources Journal*, Vol. 19, No. 2: 337-358, (Victoria).

Sewell, W.R.D. and B. Mitchell (1981)
Canadian Resources Policies: Problems and Prospects. Toronto: Methuen Press, 296 pp., (Victoria).

Sewell, W.R.D. and T. O'Riordan (1981)
Project Appraisal and Policy Review. Chichester: John Wiley& Sons, 304 pp., (Victoria).

Sewell, W.R.D. and H.D. Foster (1982)
An Assessment of Canadian Environmental Policies on Offshore Development. Ottawa: Environment Canada, 50 pp., (Victoria).

Shemilt, L.W. and G. Sheng (1983)
"An Overview of Nuclear Waste Management," *Energy, Exploration and Exploitation*, Vol. 2, No. 1, (McMaster).

Sheng, G. and L.W. Shemilt (1983)
"An Overview of the Canadian Nuclear Fuel Waste Management Program." A paper presented at the *AAAS Annual Meeting*, Detroit, Michigan, (McMaster).

Simmons, M. (1981)
EIA of Proposed Greenwich Development. Charlottetown: Department of Community Affairs, Government of Prince Edward Island, (NSCAD).

Simmons, N.K. (1982)
An Analysis of the Effectiveness of the Manitoba Environmental Assessment and Review Process. Master of Natural Resources Management Thesis. Winnipeg: University of Manitoba, Natural Resources Institute, (Manitoba).

Soubeyran, D. et M. Gariépy (1984)
"Quelques aspects de la planification environnementale des espaces urbanisés au Québec." Recueil sur les nouvelles avenues de recherche urbaine pour Forum de l'Association française de développement de la géographie, (Montréal).

Storey, K. (1980)
"Offshore Oil: Regional Impacts for the Avalon Peninsula," in *Proceedings of the Offshore Environment in the 80's Workshop on Environmental Consideration of East Coast Offshore Hydrocarbon Development*, December 20, 1980, St. John's (Memorial).

Storey, K. (1980)
Northern Peninsula Socio-Economic Impact Study. Volume I: *Background and Socio-Economic Profiles*. Volume II: *Impact Assessments and Conclusions*. Report prepared for the Department of Regional Economic Expansion, St. John's, Newfoundland. St. John's: Memorial University of Newfoundland, 449 pp., (Memorial).

Storey, K. (1980)
Socio-Economic Impacts of Offshore Oil and Gas Developments: A Selected Bibliography with Particular Reference to Newfoundland and Labrador. Prepared with a grant from Mobil Oil Canada Ltd. St. John's: Memorial University of Newfoundland, 146 pp., (Memorial).

Storey, K. (1982)
"Problems of Assessing Socio-economic Impacts of Offshore Developments." A paper presented to the *International Conference on Social Impact Assessment*: Advancing the State of the Art, Richmond, B.C., (Memorial).

Storey, K. (1982)
"The Impacts of Newfoundland Offshore Labour Preference Policy," Paper presented at the *International Conference on Oil and the Environment*, Halifax, Aug. 16-19, 1982, (Memorial).

Storey, K. (1982)
"Socio-economic Impacts of the Burgeo Road, Newfoundland." Presented to the Poster Session, *International Conference on Social Impact Assessment: Advancing the State of the Art*, Richmond, B.C., (Memorial).

Storey, K. and M. Scarlett (1981)
"Problems and Methods of Anticipating and Analyzing Future Impacts of Offshore Hydrocarbon Developments," Paper presented to the *Fifth Annual Meeting of the Canadian Regional Science Association*, Dalhousie University, Halifax, Nova Scotia, May 22-24, 1981, (Memorial).

Storey, K. and M. Scarlett (1982)
Dry Pond Proposed Hydro Electric Development Socio-Economic Study. A report prepared for Newfoundland and Labrador Hydro. St. John's: Memorial University of Newfoundland, 78 pp., (Memorial).

Storey, K. and M. Scarlett (1982)
Impacts on Community Services and Social Infrastructure of the Development of Hibernia. Report to Mobil Oil Canada Ltd. St. John's: Memorial University of Newfoundland, 428 pp., (Memorial).

Storey, K. and M. Scarlett (1982)
The Burgeo Road: A Study of Social and Economic Impacts. Summary of a two stage report prepared for the Federal Department of Regional Economic Expansion and the Provincial Department of Transportation, St. John's, (Memorial).

Strong, B.S. (s.d.)
Alaska Pipeline: Social and Economic Impact on Native People. ESCOM Report No. A1-01. Ottawa: Department of Indian and Northern Affairs, (McGill).

Strosher, H.T., W.E. Younkin, and D.L. Johnson (1980)
Environmental Assessment of the Terrestrial Disposal of Waste Drilling Muds in Alberta: Chemistry of Sump Fluids and Effects on Vegetation and Soils, Kananaskis Centre report 1980-40. Calgary: University of Calgary, Kananaskis Centre for Environmental Research, 300 pp., (Calgary).

Suffling, R. and G. Michalenko (1980)
"The Reed Affair: A Canadian Logging and Pollution Controversy," *Biological Conservation*, 7: 5-23, (Waterloo).

Sufiling, R.C. (1980)
"An Index of Ecological Sensitivity, Based on Ecosystem Age, and Related Lanscape Diversity," *Journal of Environmental Management*, 10: 253-262, (Waterloo).

Suffling, R.C. et al. (1981)
Evaluation of the Lower Churchill Development Corporation Environmental Impact Statement. A paper by a student working group. Waterloo: University of Waterloo, School of Urban and Regional Planning, (Waterloo).

Swinnerton, G.S. (1982)
Recreation on Agricultural Land in Alberta. Edmonton: Environment Council of Alberta, (Alberta).

Tan, K., and D. Thirumurthi (1978)
"Highway Construction Impact on Water-Supply Lakes," *Journal of the Environmental Engineering Division*, EES, American Society of Civil Engineering, pp. 997-1011, (TUNS).

Taylor, G. (1981)
"Acid Precipitation in Alberta: Will Development of the Athabasca Oil Sands Create a Problem?" *Alternatives*, 9(4): 3-10, (Queen's).

Technical University of Nova Scotia, Centre for Water Resources Studies. (1981)
Program description — Halifax Urban Watersheds Program. Halifax: Technical University of Nova Scotia, 11 pp., (TUNS).

Tester, F.J. (1981)
Land Claims on the Road to Participatory Democracy. Kananaskis Centre Report 1982-04, Calgary: University of Calgary, Kananaskis Centre for Environmental Research, (Calgary).

Tester, F.J. (1979)
The Potential Social, Economic and Environmental Impacts of the Proposed Polar Gas Pipeline on the District of Keewatin, Northwest Territories, Volume II. Analysis. Environmental Social Programs, Northern Pipelines, ESCOM Report No. A1-32. Ottawa: Department of Indian and Northern Affairs, 294 pp., (Calgary).

Tester, F.J. (1980)
"Social Impact Assessment: Coping with the Context of our Times," *SIA News*, Vol. 42/43, 1980, (Calgary).

Tester, F.J. (1981)
"Northern Renewable Resource Management: Socio-psychological Dimensions of Participation," in M. Freeman (ed.) *Renewable Resources and the Economy of the North*. Ottawa: Association of Canadian Universities for Northern Studies, pp. 190-197, (Calgary).

Tester, F.J. (1981)
"Welfare Approach to Monitoring," in T.W. Fookes *et al.* (eds.), *Alternative Approaches to Social and Economic Impact Monitoring*. Paper #13. Hamilton, New Zealand: Huntly Monitoring Project, pp. 39-58, (Calgary).

Tester, F.J. (1981)
Megaprojects and their Impacts. Report prepared for Ethical Issues for Canadians in the 1980's. Toronto: Anglican Book Centre, 22 pp., (Calgary).

Tester, F.J. (1982)
"Client Centered Community Impact Assessment," *Alternatives*, Spring/Summer, (Calgary).

Tester, F.J. (1982)
"Psychoanalysis and Social Impact Assessment." Opening address to the *International Conference on Social Impact Assessment, State of the Art*, Vancouver, October 24-27; reprinted in *SIA Bulletin*, Winter 1984, (Calgary).

Tester, F.J. (1984)
"Teaching SIA: Addressing Consciousness," in *Social Impact Assessment*, forthcoming, (Calgary).

Tester, F.J. and W. Mykes (1980)
Social Impact Assessment: Theory, Method and Practice. Calgary: Detselig Enterprises, Ltd., 380 pp., (Calgary).

Thérien, N. (ed.)(1981)
Simulating the Environmental Impact of a Large Hydro-electric Project. The Society for Computer Simulation, Simulation Councils Proceedings Series, Vol. 9, No. 20, La Jolla, California, 118 pp., (Sherbrooke).

Threadkell, B. (1982)
Environmental Assessment and Electric Power Generation in the Prairie Provinces: A Comparison of Manitoba Hydro, Saskatchewan Power Corporation and TransAlta Utilities. Master of Natural Resources Management Thesis. Winnipeg: University of Manitoba, Natural Resources Institute, (Manitoba).

Tiffin, S. (1978)
Environmental Assessment in an Arctic Petroleum Transportation Project. Master's Degree Project. Calgary: University of Calgary, Faculty of Environmental Design, (Calgary).

Torgerson, D. (1980)
Industrialization and Assessment: Social Impact Assessment as a Social Phenomenon. Toronto: York University Publications in Northern Studies, (Trent).

Torgerson, D. (1981)
"SIA as a Social Phenomenon: The Problem of Contextuality," in Frank Tester and William Mykes, (eds.), *Social Impact Assessment: Theory, Method and Practice*. Calgary: Detselig Enterprises, Ltd., (Trent).

Tremblay, G. (1982)
Étude des critères d'évaluation écologiques d'un site et étude des critères d'évaluation écologiques des répercussions des aménagements des sites. Maîtrise de science. Montréal: Université du Québec à Montréal, (UQAM).

Truscott, S. (1982)
The Effects of Industrialization in Nonmetropolitan Areas: Growth Theory vs. Dependency Theory. Master's Thesis. London: University of Western Ontario, Department of Sociology, (Western Ontario).

Tyler, F.H. and F.J. Tester (1980)
Social Costing and Environment: A Compendium and Analysis of the Implication for Alberta Environment. Kananaskis Centre report 1980-31. Calgary: University of Calgary, Kananaskis Centre for Environmental Research, 63 pp., (Calgary).

Ugo, U. (1982)
LNG and Nigerian Gas Market: An Economic Analysis. Calgary: University of Calgary, MS CRE Programme, (Calgary).

Vaillancourt, J.-G. (1979)
"The Ecology Question: Some Strategies: The Ecology Manifesto and the Growth of the Movement in Quebec," *Our Generation*, Vol. 13, No. 4: 5-13, (Montréal).

Vaillancourt, J.-G. (éd.) (1981)
"Ecologie sociale et mouvements écologiques," *Sociologie et Sociétés*, XIII, (1), 179 p., (Montréal).

Vaillancourt, J.-G. (1982)
"Evolution, diversité et spécificité des associations écologiques québécoises: de la contre-culture et du conservationisme à l'environnementalisme et à l'écosocialisme." Dans *Sociologie et sociétés*, XIII, (1): 81-98, (Montréal).

Vaillancourt, J.-G. (1982)
"Le mouvement écologiste québecois," dans S. Proulx et P. Vallieres, *Changer de société*. Montréal: Editions Québec-Amérique, p. 143-163, (Montréal).

Vaillancourt, J.-G. (1982)
"Le mouvement écologiste québecois." Communication présentée au 6e *Colloque du Conseil québecois de l'environnement* et publiée dans *De Toute Urgence*, XII (2): 231-243, (Montréal).

Vaillancourt, J.-G. (1982)
"Les interventions du groupe Ecologie Humaine d'Hydro-Québec," dans *Les actes du colloque annuel de l'A.C.S.A.L.F.* Laval, Québec: Editions Coopératives Albert St-Martin, (Montréal).

Vaillancourt, J.-G. (1982)
Mouvement écologiste, énergie et environnement: essais d'écosociologie. Montréal: Editions Coopératives Albert St-Martin, 262 p., (Montréal).

Val, E. and J.G. Nelson (1983)
"Offshore Petroleum Development and Fisheries Interactions," *GeoJournal*, Vol. 7, No. 3: 247-260, (Waterloo).

Veeman, T.S. (1982)
"Discussion: Economics of Land Use," *Canadian Journal of Agricultural Economics*, Proceedings Issue, 7 pp., (Alberta).

Visser, S.A., et P. Couture (1981)
"Impact potentiel du flottage du bois sur le milieu aquatique," *The Forestry Chronicle*, Vol. 57, No. 1: 22-26.

Waller, D.H. (1978)
"Water Quality Impacts of Agriculture in the Shubenacadie-Stewiacke River Basin," Shubenacadie — Stewiacke River Board, Technical Report No. 7, (TUNS).

Walsh, D. (s.d.)
Baseline Studies for Environmental Impact Assessment (EIA): A Labrador Case Study. Master of Environmental Studies Thesis. Halifax: Dalhousie University, Institute for Resource and Environmental Studies, (Dalhousie).

Waylen, P. (1980)
"Analysis of Flooding on the Coquikalla River." A paper presented to the *Ontario Division of the Canadian Association of Geographers*, (Saskatchewan).

Wellman, B. (1979)
"Community Transformations: Present and Future," in Dan Chekki, (ed.), *Participatory Democracy in Action*. New York: Advent, (Toronto).

Wellman, B. (1981)
"Applying Network Analysis to the Study of Social Support," in Benjamin Gottliets, (ed.), *Social Networks and Social Support*. Beverly Hills: Sage, (Toronto).

Wellman, B. (1982)
"Studying Personal Communities," in Nan Lin and Peter Marsden, (eds.), *Social Networks and Social Structure*. Beverly Hills: Sage, (Toronto).

Whitney, J. (1981)
Urban Energy, Foot and Water Use in Arid Regions and Their Impact on the Hinterland: A Conceptual Framework. Research Paper No. 1. Khartoum: Institute of Environmental Studies, 29 pp., (Toronto).

Whitney, J., (ed.) (1981)
The Impact of Water Points on Environmental Degradation. Monograph No. 2. Khartoum: University of Khartoum, Institute for Environmental Studies, (Toronto).

Whitney, J., (ed.) (1981)
The Environmental Consequences of Open Grazing in the Central Butana, Sudan. Monograph No. 1. Khartoum: University of Khartoum, Institute for Environmental Studies, (Toronto).

Whitney, J. (1982)
"Urban Energy and its Impact on the Hinterland: A Conceptual Approach," in B. Spooner (ed.), *Ecological Problems of Human Settlements in Arid Regions*. Paris: MAB Technical Note, pp. 6, (Toronto).

Whitney, J. and A.I. Mograby (1982)
"Development versus Conservation: the Case of Dinder National Park, Sudan," *Environmental Conservation*, Fall Issue, (Toronto).

Whitney, J. and C. Dufournaud (1982)
"Ecological Input-Output Models," in I. Burton and R. White (eds.), *Ecoville: Urbanization in the Context of Ecodevelopment*, Toronto: University of Toronto, Institute for Environmental Studies, pp. 133-158, (Toronto).

Whitney, J. and C. Dufournaud (1982)
The Simulation of the Urban-Rural Ecological System: The Simurcol Model. Project Ecoville, Working Paper No. 1. Toronto: University of Toronto, Institute for Environmental Studies, (Toronto).

Whyte, A.V. (1981)
"Evaluation of Non-Monetary Impacts in Development Projects," paper presented to *United Nations University Workshop on Evaluation of Rural Development and Health Programmes*, Khartoum, (Toronto).

Whyte, A.V. and I. Burton (1980)
Environmental Risk Assessment, SCOPE 15. Chichester: John Wiley and Sons, 157 pp., (Toronto).

Whyte, A.V. and I. Burton (1981)
"Risk Assessment in Canada: The Case of the Transportation of Hazardous Materials," paper presented to the *American Association for the Advancement of Science*, Toronto, (Toronto).

Whyte, A.V. and I. Burton (1982)
"Public Perception of Risk," in *Living with Risk: Environmental Risk Management in Canada*. Toronto: University of Toronto, Institute for Environmental Studies, Monograph No. 3, (Toronto).

Wilkie, A. (1981)
"Who Assesses the Impacts of Major Energy Projects: A Scottish Case Study — Mossmorran." A paper presented at *The Human Side of Energy Conference*, Edmonton, August, 1981, (TUNS).

Wilkie, A. (1982)
"Cities: Their Response to Resource Development." A paper presented to the *Canadian Institute of Planners Conference*, Ottawa, June, 1982, (TUNS).

Wilkie, A. (1982)
"Ethical and Social Impacts of Offshore Development in the Arctic." A paper presented at the *First Atlantic Student Pugwash Conference*, Dalhousie University, Halifax, May 1982, (TUNS).

Williams, P.J., T.P. Wilkinson, M.W. Smith, J.K. Torrance, and J.P. Johnson (1979)
Preliminary Report on a Review of Environmental Impact Statement and Annexes, Alaska Highway Pipeline. Prepared by Peter J. Williams and Associates Ltd., Ottawa, for Federal Environmental Assessment Review Office, 38 pp., (Carleton).

Williams, P.J. and M.W. Smith (1980)
Preliminary Report on a Review of Environmental Impact Statement and Supporting Documents, Relating to Melville Island Components of Arctic Pilot Project. Prepared by Peter J. Williams and Associates Ltd., Ottawa, for Federal Environmental Assessment Review Office, 24 pp., (Carleton).

Williams, P.J., T.P. Wilkinson and M.W. Smith (1980)
Preliminary Report on a Review of Environmental Impact Statement and Supporting Documents, Relating to Norman Wells Oil field Expansion and Pipeline Project. Prepared by Peter J. Williams and Associates Ltd., Ottawa, for Federal Environmental Assessment Review Office, 20 pp., (Carleton).

Wilson, J.M. and M. Cann (1983)
"Uprooting and Rerooting; Some Reflections on the Columbia River Project," *B.C. Studies*, No. 58, Summer, 1983, (Simon Fraser).

Wismer, D.A. (1980)
The Impact of Thermal Effluents (of the Bruce Nuclear Complex) on Smallmouth Bass Reproductive Success at Baie du Doré, Lake Huron, M.Sc. Thesis. Toronto: University of Toronto, Department of Zoology, 134 pp., (Toronto).

Woo, M-K. and P. Waylen (1983)
Prediction of Annual Floods in Northern Ontario Basins. Hamilton: McMaster University, Technology Assessment in Subarctic Ontario, Report Number 2, (McMaster).

Wood, K.S. (1980)
"Norway: Regional Impacts of Offshore Hydrocarbon," A paper presented to *Offshore Environment in the 80's*, Saint John's, Nfld., December, 1980, (Dalhousie).

Wood, K.S. (1981)
"Managing Social Impacts from Large Scale Industrial Complexes: Norway's Prospective Act Exploration North of 60° N," *Social Impact Assessment: Theory, Method and Practice*, Calgary: Delselig Enterprises Ltd., pp. 269-298, (Toronto).

Wright, D.S. (1983)
Preparing an Environmental Impact Statement: A Case Study of the Midwest Lake Uranium Project. Master of Science research project. Toronto: University of Toronto, Department of Geography, (Toronto).

Yu, M. (1979)
Public Input in Water Resources Planning: The Middle Grand River Basin, Ontario. Master of Arts Research Paper. Toronto: University of Toronto, Department of Geography, (Toronto).

Zaretsky, D. (1980)
A Case of Environmental Impact Assessment in the Coal Industry in British Columbia. Master's Degree Project. Calgary: University of Calgary, Faculty of Environmental Design, (Calgary).

STUDENTS PAPERS/ÉCRITS D'ÉTUDIANTS

During our survey we asked professors to submit titles of works by their students which they judged to have the merit and relevance for inclusion in the Directory. We received lists of papers by individuals and teams of students which examined a wide range of activity and thought, from diverse academic perspectives — on case studies, EIA methodology and various other aspects of EIA. Masters theses or comparable work are included in the previous section, "Bibliographic Submissions".

Lors de notre enquête, nous avons demandé aux professeurs de nous soumettre les titres des travaux effectués par leurs étudiants qui, selon eux, méritaient d'apparaître dans le Répertoire. Nous avons reçu des nombreux écrits par des étudiants, individuellement et en groupe, qui ont revu une grande gamme d'activités et de pensées de diverses perspectives académiques, couvrant des sujets tels que des cas réels, la procédure d'évaluation des incidences environnementales et divers autres aspects de l'évaluation environnementale. Les thèses de maîtrise et autres travaux du genre sont inclus dans la section de la bibliographie.

CARLETON UNIVERSITY

Howard, G. (1982). "Scientific Basis for Environmental Impact Assessment." Department of Integrated Science Studies.

DALHOUSIE UNIVERSITY

Institute for Resource and Environmental Studies (1982) "Fundy Tidal Power Development: A Proposal for an Environmental Assessment". A Group Term Paper for the course IRES 5001B, "Environmental Assessment."

ÉCOLE POLYTECHNIQUE DE MONTRÉAL

Travaux pratiques présentés dans le cours 1.6286, "Impacts des projets sur l'environnement" offert par la section du génie de l'environnement.

Lalonde, R. *et al.* (1979) "Centrale Rapide Spicer: Étude préliminaire environnementale", 70 p. en plus des annexes [Le texte est consultable chez P. Dumas & Assoc., Ingénieur conseil, 405, des Erables, Laval-sur-le-Lac, Québec. H7R 1B1.]

Beauchamp, N., C. Christin, Y. Deshaies, F.-P. Dionne, D. Mayers, A. Périn et L.-M. Poupart (1981). "Étude d'impact sur le projet Archipel de Montréal: Les Rapides de Lachine." 125 p.

Bilodeau, P., L. Bukkfalvi, M. Mietton-Peuchot, C. Peuchot, S. Rocheleau et L. Tremblay (1981). "Étude d'impact sur le projet Archipel de Montréal: Les Rapides de Lachine." 213 p. en plus d'une annexe.

Bubic, I., J. Dandurand, L. Dauphin, L. Lepage, G. Parent et J. Phaneuf (1982). "Etude d'impact sur le projet d'implantation d'un centre d'élimination des biphényles polychlorés par la compagnie CEBIPOL Ltée dans la région montréalaise: étude biophysique.", 82 p.

Gadoury, G., J.-M. Lewis et L. Rancourt (avril 1982). "Étude d'impact sur le projet d'implantation d'un centre d'élimination des biphényles polychlorés par la compagnie CEBIPOL Ltée dans la région montréalaise: choix de l'emplacement." 28 p. en plus de 5 annexes.

UNIVERSITY OF GUELPH

Jutla, R.S. (s.d.). "An Evaluation of Visual Quality in a Rural Townscape," School of Rural Planning and Development, 60 pp.

Ladd, C. (s.d.) "An Approach to the Comprehensive Evaluation of Park Development," School of Rural Planning and Development, 50 pp.

Moull, T.C. and S. Harding. (s.d.) "An Evaluation of the Hazard Lands Policy in Erin Township," School of Rural Planning and Development, 30 pp.

LAKEHEAD UNIVERSITY

Garry, C. (1980). "An Assessment of the Impact of Proposed Cottage Development at Bay's End, Lake Superior." Bachelor of Science Thesis, Department of Geography.

Murdoch, B. (1981). "Evaluation of Urban River Bank Landscape for Determining Recreational Suitability: City of Thunder Bay." Bachelor of Arts Thesis, Department of Geography.

UNIVERSITÉ LAVAL

Rapports critiques sur des études d'impact rendues publiques. Ces travaux ont été produits dans le cadre du cours GC1-62994, "Impact des projets sur l'environnement," Département de Génie civil.

Allen, R., C. Dubreuil, P. Mangez et P. Shoiry (1980). "Centrale à réserve pompée Delaney."

Diguer, F., P. Guerrier et A. LeHy (1980). "Gazoduc Québec-Maritimes."

Blanchet, D., M. Bouillé, S. Savard et J. Saywell (1980). "Projet minéralo-portuaire des Îles-de-la-Madeleine."

Laprise, P., D. Génilas, L. Laliberté, F. Roy et M. Martin (1980). "Autoroute 73 Nord et Sud."

Carrière, L., J.-C. Raymond, P. Robert et G. Viger (1980). "Complexe méthanier dans l'estuaire du Saint-Laurent."

Beauregard, A., J. Proteau, M. Rubin et Y. Lachapelle (1980). "Routes d'accès au village du Nouveau-Comptoir."

Bastien, D., Y. Gosselin, F. Guimont et C. Hallé (1981). "Archipel de Montréal."

Gill, D., Migneault, M. Labrecque et M. Lindsay (1981). "Gros Cacouna."

Asseupi, A., M. Dubé, M. Caron, D. Lecroix et A. Ségal (1981). "Les aboiteaux de Kamouraska."

Brassard, F., L. Désilets, J. Ohanion et O. On'Ekanda (1981). "Centrale de traitement des déchets industriels inorganiques (Stablex)."

Dion, A., M. Grenier et D. Groulx (1982). "Projet d'extension du Port de Québec (Evaluation impact social)."

Poiré, G. et J.-L. Ratté (1982). "Projet d'extension du Port de Québec (étude hydrodynamique et sédimentalogique)."

Boily, L., M. Lafond, E. Poiré, Y. Pouliot, et F. Vinet (1982). "Projet d'extension du Port de Québec (aspects biologiques)."

Picard, M., et B. Badibanga (1982). "Projet d'extension du Port de Québec (aspects esthétiques, visuels et patrimoniaux)."

Deschênes, J., et R. Soucy (1982). "Projets d'extension du Port de Québec (qualité du milieu)."

MCGILL UNIVERSITY

Bell-Isle. (1979). "L'élaboration d'une politique et d'un procédé décisionnel en vue d'évaluer l'impact socio-économique lors de la construction d'autoroutes", School of Urban Planning.

Trudeau, A. (1979). "Grilles d'identification des impacts socio-économiques", School of Urban Planning.

Jimenez Saldana, E. (1981). "Ecological Assessment of the Oil Industry's Development," School of Urban Planning.

NOVA SCOTIA COLLEGE OF ART AND DESIGN

Arno, M. (1982). "The Impact of Offshore Oil and Gas Development on Settlements." Undergraduate Thesis. Department of Environmental Planning.

Department of Environmental Planning (1982). "Assessment of Labour Force Impacts in the Eastern Shore Region of Nova Scotia form the Proposed Development of Offshore Gas — Economic and Social Impact Project", EP111 Group Project.

RYERSON POLYTECHNICAL INSTITUTE

Bhagwan, D. (1979). "A Methodological Framework for Assessing Socio-economic Impacts of Provincial Parks." Fourth Year Research Paper. Department of Geography.

Fior, J.B. (1983). "A Review of the Ontario Environmental Assessment Board." Fourth Year Research Paper. Department of Geography.

Hambly, J.G. (1980). "A Study of Ontario's Pulp and Paper Industry." Fourth Year Research Paper. Department of Geography.

Nolan, J.W. (1980). "A Criteria Weighting System for Evaluating the Hazard Potential of Waste Disposal Sites." Fourth Year Research Paper. Department of Geography.

Oles, D.A. (1981). "The Impact of Land Use Activity and Pollution Control Legislation on the Water Quality of the Don River 1964-1979." Fourth Year Research Paper. Department of Geography.

Reburn, J. (1980). "A Study on the Willingness to Pay for the Reduction of Marshalling Yard Noise." Fourth Year Research Paper. Department of Geography.

Rucetti, J.E. (1980). "A Study of Public Perception of Air Pollution in Sudbury, Ontario." Fourth Year Research Paper. Department of Geography.

Scheide, R.J. (1982). "The Implications of Urban Development Upon Kortright Waterfowl Park — Guelph, Ontario." Fourth Year Research Paper. Department of Geography.

Spearin, D. (1979). "A Methodology for Analyzing Primary Resource Industries." Fourth Year Research Paper. Department of Geography.

Ving, J.M. (1981). "An Evaluation of Canada's East-Coast Sealing Industry: The 1980 Experience." Fourth Year Research Paper. Department of Geography.

SAINT MARY'S UNIVERSITY

Andries, D. (in preparation) "The Impact of the Nova Scotia *Beach Protection and Preservation Act* upon the Mining of Beach Sand and Gravel." Bachelor of Arts Thesis. Department of Geography.

UNIVERSITE DE SHERBROOKE

Audette, D. (1979). "Lac Massawippi: Différences dans la perception et l'attitude vis-à vis le milieu, entre les communautés riveraines." Rapport de B. Sc., Département de géographie, 106 p.

Casgrain, V. (1982). "Analyse d'impact visuel d'un couloir de transport hydroélectrique." Rapport de B. Sc., Département de géographie, 85 p.

Chartrand, L. (1982). "Projet d'une Station de Métro de Surface à Pointe-aux-Trembles; études d'impact." Rapport de B. Sc., Département de géographie, 49 p.

Poulin, J.P. (1981). "Impacts de l'amélioration d'une route rurale sur l'environnement." Rapport de B. Sc., Département de géographie, 20 p.

Saint-Onge, M. (1982). "Impact économique des Chutes Darwin sur la municipalité de Rawdon." Rapport de B. Sc., Département de géographie, 43 p.

SIMON FRASER UNIVERSITY

Department of Geography (1979). "Motorized Recreation in the Greater Vancouver Area." Regional Planning II, 39 pp.

Department of Geography (1980). "A Time to Keep: The Farmlands of the Delta." Regional Planning II, 27 pp.

UNIVERSITY OF TORONTO

Hare, K. and S. Renzetti (1982). "The Exemption Process in the Context of the *Environmental Assessment Act*." Project for INI 420I, "Environmental Research Seminar", Innis College.

Kinzinger, L. and L. Kneeshaw (1983). "Public Notice Procedures Under the Ontario Environmental Assessment Act." Project for INI 420I, "Environmental Research Seminar", Innis College.

UNIVERSITY OF WATERLOO

Dodds, T. (1982). "A Quantitative Evaluation Methodology for Scenic Quality in Pukaskwa National Park." Bachelor's Thesis, School of Urban and Regional Planning.

UNIVERSITY OF WESTERN ONTARIO

Crich, W.A. (1981). "Impact Assessment at the Community Level: A Case Study of the Golden Mile. Sarnia. Ontario." Bachelor's Thesis, Department of Geography.

Ferguson, S.G. (1979). "A Study of the Nanticoke Industrial Development." Bachelor's Thesis, Department of Geography.

Jones, B.D. (1982). "A Study of the Nanticoke Industrial Development." Bachelor's Thesis, Department of Geography.

Smith, B.A. (1982). "Citizen Participation in Electrical Power Planning in Southwestern Ontario: An Evaluation of Ontario Hydro's Public Participation Program." Bachelor's Thesis, Department of Geography.

Thompson, J.E. (1981) "Maple Residents' Attitudes towards the Potential Impacts of Canada's Wonderland." Bachelor's Thesis, Department of Geography.

Wilcox, J.A.S. (1979). "Environmental Assessment: A Case Study of Great Manitou Island, Lake Nipissing, Ontario." Bachelor's Thesis, Department of Geography.

YORK UNIVERSITY

Faculty of Environmental Studies (1981). "Environmental Impact Assessment of the Derry Road Realignment." Faculty of Environmental Studies. EIA Workshop Group.